Brickcom

Megapixel Day & Night Outdoor Bullet Network Camera

Outdoor Bullet V2 Series

OB-100A/WOB-100A/GOB-100A

User's Manual

Quality Service Group

Product name:	Network Camera (OB-100A V2 series)
Release Date:	2010/10
Manual Revision:	V1.0
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Table of Contents

Before You Use This Product **1**
Regulatory Information **2**
Chapter 1 - Package Contents **3**
Chapter 2 - Outdoor Bullet Network Camera Overview **5**
Chapter 3 - Device Appearance Description **7**
Chapter 4 - Installation **11**
4.1 Hardware Installation **11**
4.2 Camera Connection **17**
4.3 System Requirements **19**
4.4 Software Installation **20**
4.3.1 EasyConfig 28
Chapter 5 - Accessing the Network Camera **36**
5.1 Check Network Settings **36**
5.2 Add Password to Prevent Unauthorized Access **36**
5.3 Authentication **37**
5.4 Installing the Plug-In **38**
Chapter 6 - Live View **39**
Chapter 7 - Configuration **42**
7.1 Camera/Video/Audio **42**
7.1.1 Camera 42
7.1.2 Video 45
7.1.3 Audio 49
7.1.4 Multicast 50
7.2 Network **51**
8.2.1 IP Settings 51
8.2.2 UPnP 55
8.2.3 DDNS (dynamic domain name service) 56
8.2.4 EasyLink™ 57
8.2.5 Wireless 58
8.2.6 HTTP/HTTPS 65
7.3 Event **67**
8.3.1 Event Settings 67
8.3.2 Motion Detection 71
8.3.3 Digital Input (DI) 72
7.4 Notifications **73**
8.4.1 FTP Settings 73

8.4.2 E-mail Settings 74
8.4.3 Samba Settings 75
8.4.4 HTTP Settings 76
8.4.5 Digital Output (DO) 77
8.4.6 Video Clip 77
7.5 System 78
8.5.1 System Log 78
8.5.2 Date and Time 80
8.5.3 Device Information 81
8.5.4 Storage Management(*) 82
7.6 Maintenance 84
8.6.1 User Management 84
8.6.2 Language 85
8.6.3 IP Filter 85
8.6.4 Firmware Upgrade 86
8.6.5 Configuration 86
8.6.6 Reset to Default 87
8.6.7 Reboot 87

Before You Use This Product

In many countries, there are laws prohibiting or restricting the use of surveillance devices. This Network Camera is a high-performance, web-ready camera which can be part of a flexible surveillance system. It is the user's responsibility to ensure that the operation of this camera is legal before installing this unit for its intended use.

Upon opening the product's package, verify that all the accessories listed on the "Package Contents" are included. Before installing the Network Camera, read the warnings in the "Quick Installation Guide" to avoid misuse. When installing the Network Camera, carefully read and follow the instructions in the "Installation" chapters to avoid damages due to faulty assembly or installation.

Regulatory Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

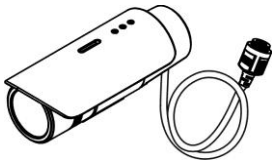
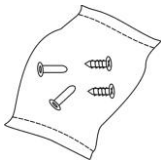
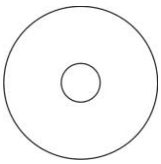
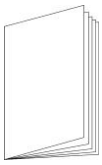
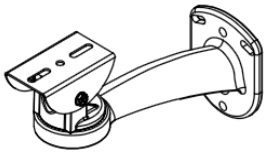
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

Chapter 1 - Package Contents

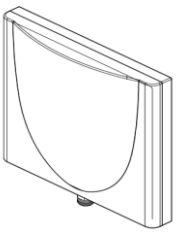
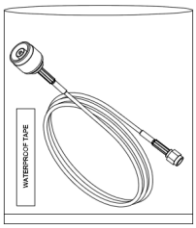
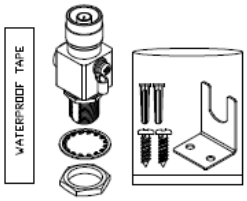
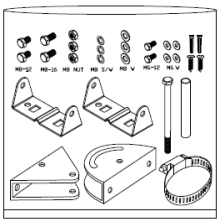
Please check to make sure the product package contains all the accessories listed below.

A. Camera Package Contents

a. Network Camera (OB-100A/WOB-100A/GOB-100A) 	**b. Shielding Cover**
c. Screw bag 	**d. Product CD** 
e. Warranty Card / Easy Installation Guide 	**f. 2 Water Proof Connectors**
g. Dry Bag	**h. High Power POE (Optional)**
i. Bracket (Optional) 	**j. Bracket Assembly Plate (Optional)**
k. Wi-Fi Dual Band Antenna package (Optional)	**l. 3G Antenna package (Optional)**

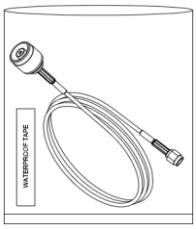
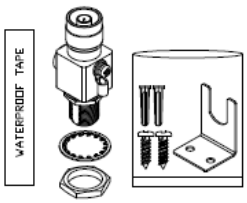
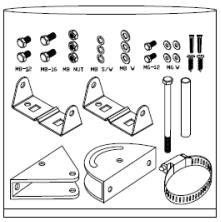
B. Wi-Fi Antenna Package contents (Optional)

Refer to the installation guide included in the package when installing the Wi-Fi antenna

a. Wi-Fi Dual Band Antenna 	**b. Extension Cable** 
c. Surge Arrestor Kit 	**d. Mount Kit** 

C. Wi-Fi Antenna Package contents (Optional)

Refer to the installation guide included in the package when installing the 3G antenna

a. 3G Antenna	**b. Extension Cable** 
c. Surge Arrestor Kit 	**d. Mount Kit** 

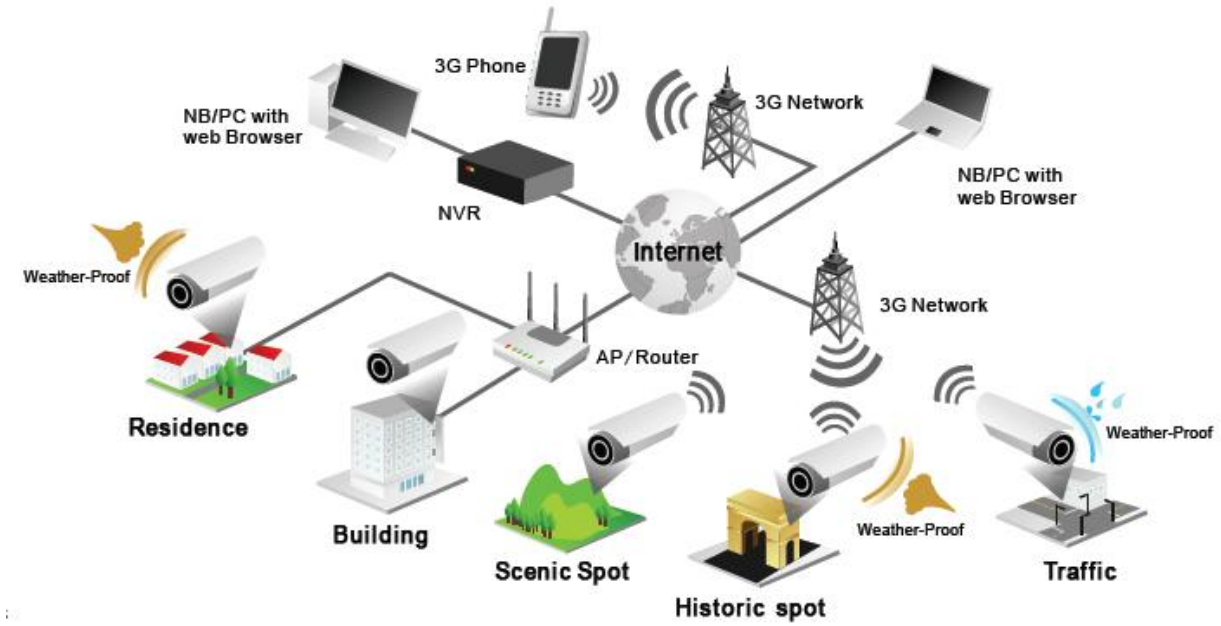
Chapter 2 - Outdoor Bullet Network Camera Overview

The Brickcom OB-100A SERIES is an outdoor bullet network camera. It adopts a megapixel sensor which allows the camera to deliver extremely clear and detailed images that CCTV cameras cannot offer. To optimize use of the megapixel resolution, the OB-100A SERIES uses efficient H.264/ MJPEG/ MPEG-4 codec compression to deliver dual configurable video streams simultaneously at up to 30 fps. These features make this series the perfect outdoor camera for neighborhood, school campus, and parking lot surveillance.

The OB-100A SERIES has many user friendly features, such as the Smart Focus capability which allows users to configure settings for excellent image quality without difficult procedures. Support for Power over Ethernet enables the camera to use the same cable for power and data transmission, eliminating the need to install an external power supply.

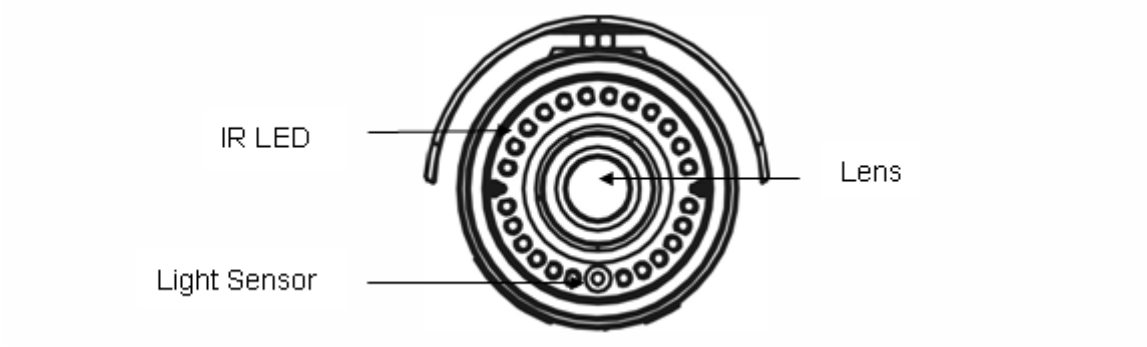
Installation for the WOB-100A/GOB-100A models is not restricted by location or landforms. The cameras offer various wireless options that make connecting to networks easier by adopting the technology of IEEE 802.11 a/b/g/n and 3G SIM module. The wireless Bullet Cameras can be set within any wireless or 3G signal coverage areas. Users do not have to worry about the data connection failing because each camera is equipped with a SD/SDHC memory card slot for local storage.

With an IP67 certified outdoor enclosure, the OB-100A SERIES is not only weather proof, but also dust and rust resistant. By utilizing a built-in industrial fan and heater, it can perform well in extreme environments.

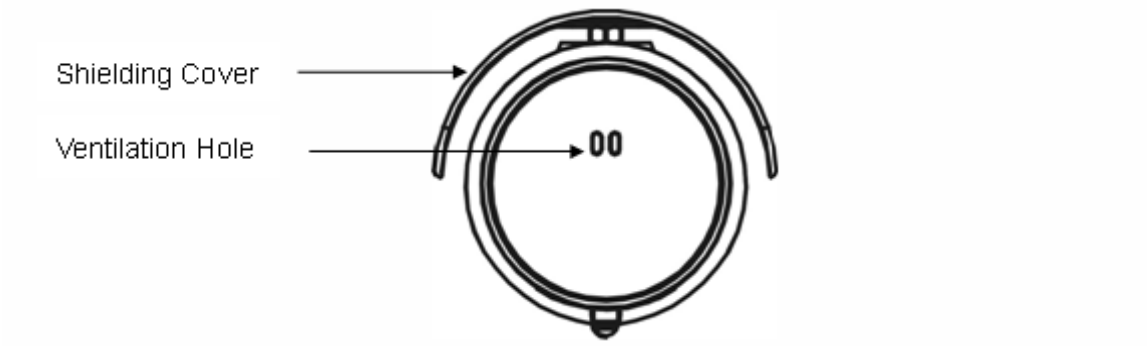

3G Phone
NB/PC with
web Browser
3G Network
NB/PC with
web Browser
NVR
Internet
Weather-Proof
3G Network
AP/Router
Residence
Building
Scenic Spot
Historic spot
Weather-Proof
Weather-Proof
Traffic

Chapter 3 - Device Appearance Description

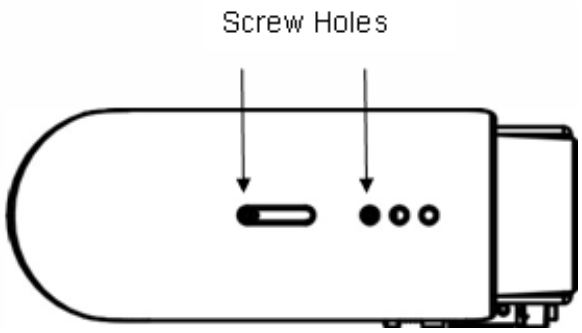
< Front Panel >



< Rear Panel >



< Top >



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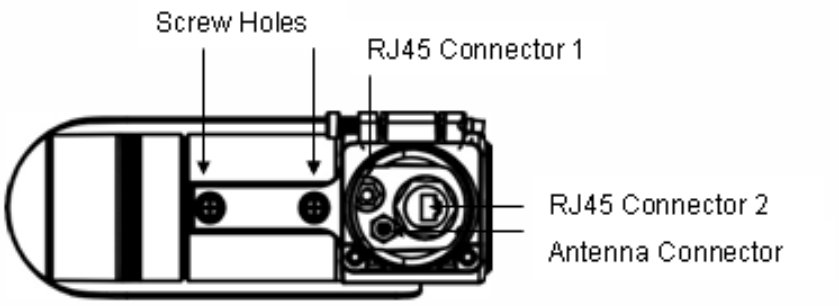
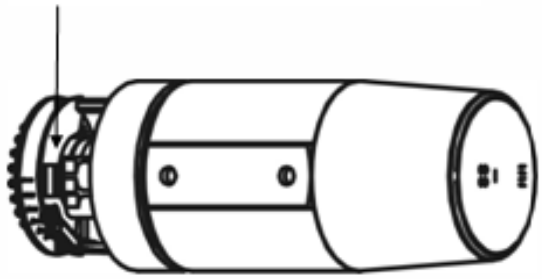
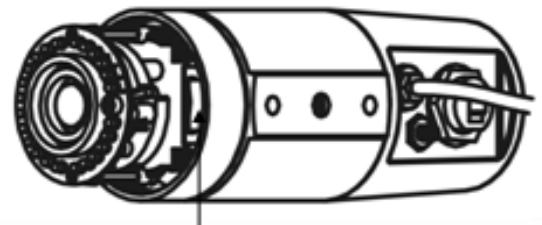


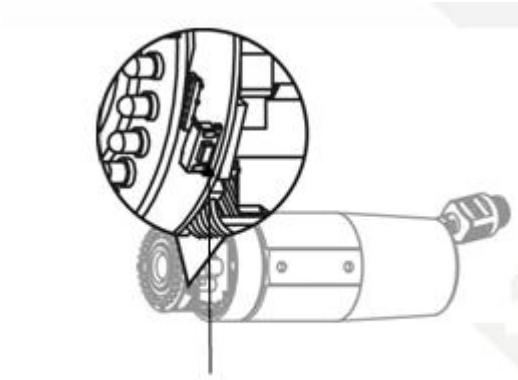
< Side >

Micro-SD/SDHC Card Slot





3G SIM Card Slot



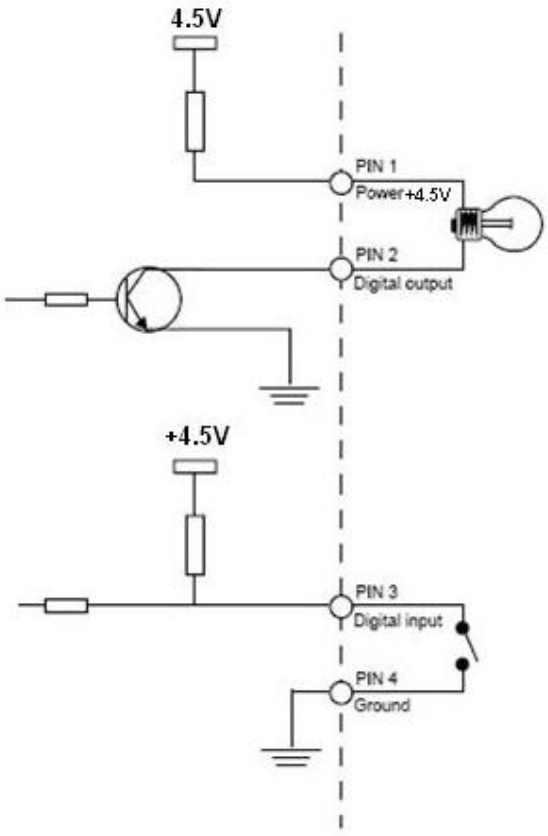
< Extension I/O Terminal Block >

The Network Camera provides an extension I/O terminal block which is used to connect the camera with external input/output devices. The pin definitions are listed as below.

Pin	Function
1	Power + 4.5V
2	Digital Output
3	Digital Input
4	Ground

Pin	Function
1	RS485+
2	RS485-
3	AC24V
4	AC24V

< DI/DO Diagram >



EXPERT IN WIRELESS IP SURVEILLANCE

< Hardware Reset >

The Reset Button can be used to reboot the camera or restore it to factory default settings. If the camera experiences a problem, rebooting the camera may correct the problem. If the problem remains, please restore the camera to factory default settings and reinstall the software.

To Reboot

Press and hold the Reset Button for one second using a paper clip or thin object. Wait for the camera to reboot.

To Restore

Press and hold the Reset Button for ten seconds until the LED light turns off. When successful restored, the LED will be blue during normal operation.

NOTE - By restoring the camera, all settings will be restored to the factory default settings.

Micro-SD/SDHC Card Capacity

The network camera is compatible with Micro-SD/SDHC (Maximum 32GB) cards.

(*) These are optional features. Please refer to the Product List for the full list of optional features that are available for this product.

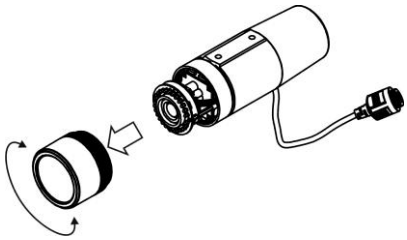
Chapter 4 - Installation

4.1 Hardware Installation

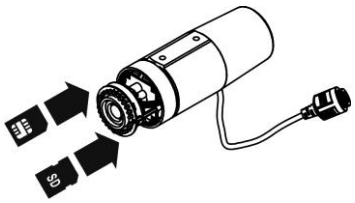
WARNING - Do not mount the camera on a soft material. The camera may fall and be damaged.

A. Micro-SD/SDHC Card and 3G SIM Card Installation

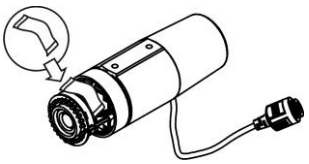
a. Remove the Lens cover from the Bullet Camera.



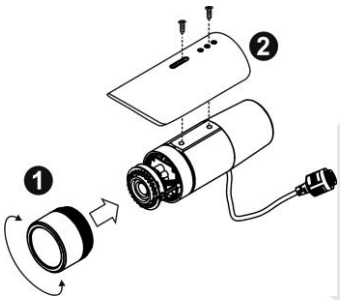
b. Inset the Micro SD/SDHC card and 3G SIM card(*) into their respective slots.



c. Place a dry bag onto the camera device.

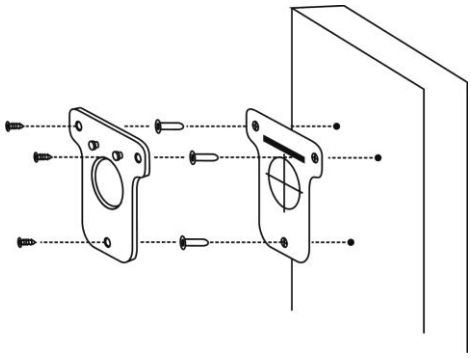


d. Reattach the Lens cover and secure the cover to the top of the camera device using two screws.

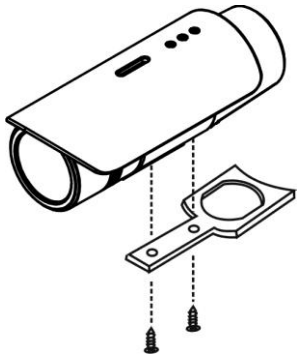


B. Wall Installation Using the Optional Bracket

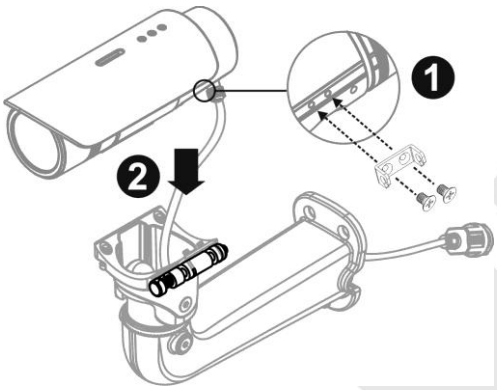
a. Using the Bracket plate as a guide, drill three holes into the wall and hammer the supplied plastic anchors into the three holes. Use a screwdriver and the supplied screws to secure the plate to the wall.



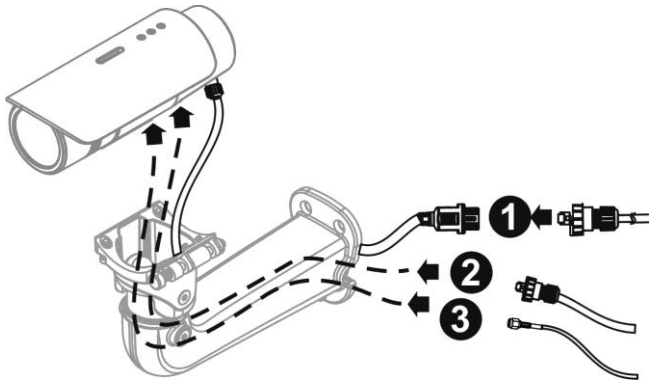
b. Attach the Bracket Assembly Plate to the bottom of the camera using two screws.



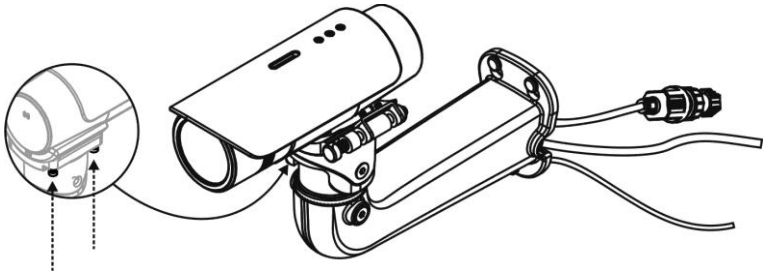
c. (1) Use the two supplied screws to secure the bracket to the side of the camera. (2) Push back the spring on the mortise lock and hook the camera and attached bracket onto the groove of the wall mount bracket as shown in the diagram.



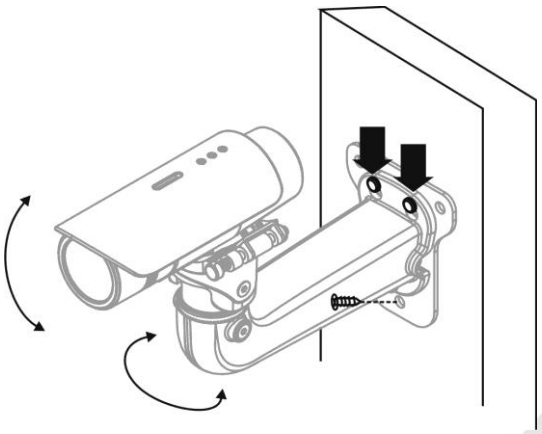
d. Connect (1) the POE cable; (2) DIDO, Audio In/Out, RS485 cable; and (3) Antenna cable with the camera. Refer to step 3 for more details installation information.



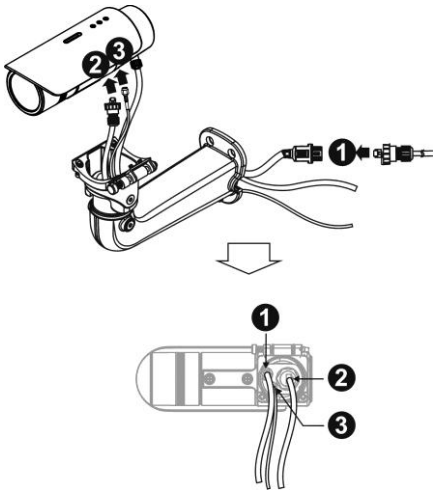
e. Secure the two screws on the wall mount bracket.



f. Place the wall mount bracket on the plate and attach it using the supplied screws. Adjust the angle of the wall mount bracket towards the area to be monitored.



C. DIDO, Audio In/Out, RS485, and Antenna Connection



a. PoE Connection

For the Power over Ethernet connection, construct the PoE cable using the pin definitions of the RJ45 connector below and refer to step 5 for instructions on how to install the Water Proof Connector. Once the PoE cable has been constructed using the waterproof connector, pass the RJ-45 cable from the camera through the bracket and connect it to the PoE cable.

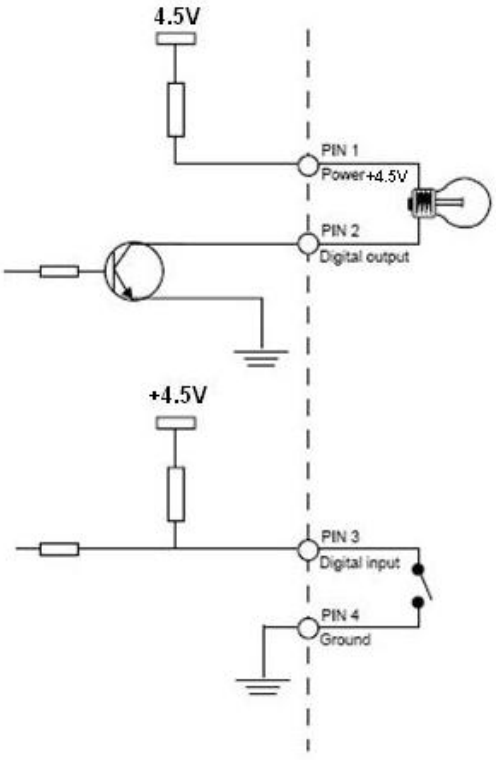
RJ45 Connector 1	
Pin No.	Function
Pin 1	Transmit Out+ (Tx+)
Pin 2	Transmit Out- (Tx-)
Pin 3	Receive In+ (Rx+)
Pin 4	DC 48V
Pin 5	DC 48V
Pin 6	Receive In- (Rx-)
Pin 7	48V_GND
Pin 8	48V_GND

b. DIDO, Audio In/Out, RS485 Cable Connection

For the DIDO, Audio In/Out and RS485 cable connection, construct an Ethernet cable using the pin definitions of the RJ-45 connector below and refer to step 4 for instructions on how to install the Water Proof Connector. Once the Ethernet cable has been constructed using the waterproof connector, pass the cable through the bracket and connect it to the RJ-45 connector at the bottom of the camera.

RJ45 Connector 2	
Pin No.	Function
Pin 1	Power +4.5V
Pin 2	Digital Output
Pin 3	Digital Input
Pin 4	Ground
Pin 5	RS-485-
Pin 6	RS-485+
Pin 7	Audio-in
Pin 8	Audio-out

DIDO Diagram



c. WiFi or 3G Antenna Extension Cable Connection

Pass the Antenna extension cable through and bracket and connect it to the Antenna connector at the bottom of the camera.

d. Water Proof Connector

Refer to the installation guide included in the package when installing the Water Proof connector.

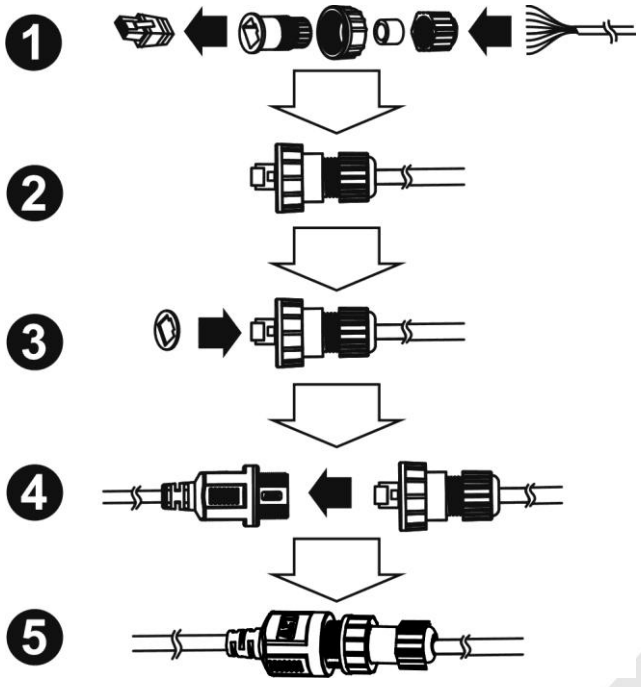
i. Insert the stripped cable through the sealing nut and the housing. Clamp the cable with an RJ45 plug.

ii. Push the RJ45 plug into the housing and secure the sealing nut tightly.

iii. Attach the gasket to the front of the housing.

iv. Connect the Ethernet cable to the RJ45 cable.

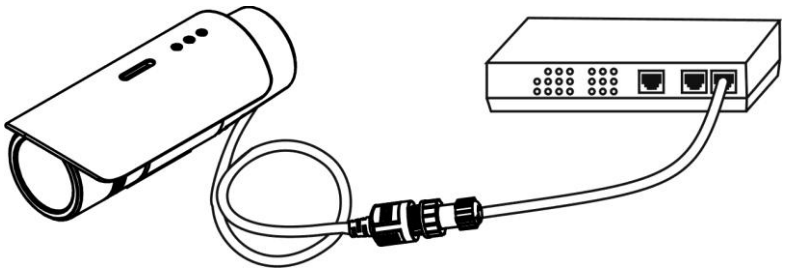
v. Secure the connectors tightly.



4.2 Camera Connection

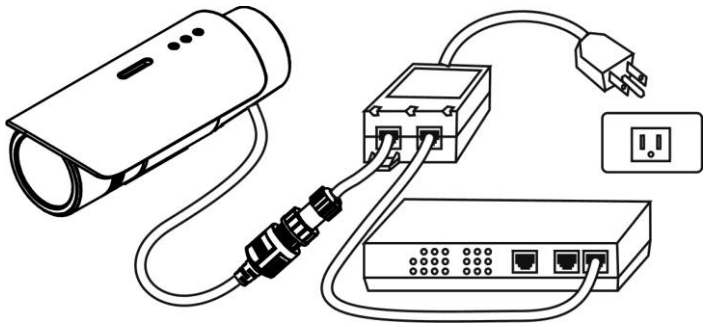
The OB-100A is PoE compliant, so there are two options for connecting the camera to a power and Ethernet source. The camera can either be connected to a PoE-enabled switch or a non-PoE switch.

a. If using a PoE-enabled switch:



i. Use a single Ethernet cable to connect the camera to the PoE-enabled switch.

b. If using a non-PoE switch:

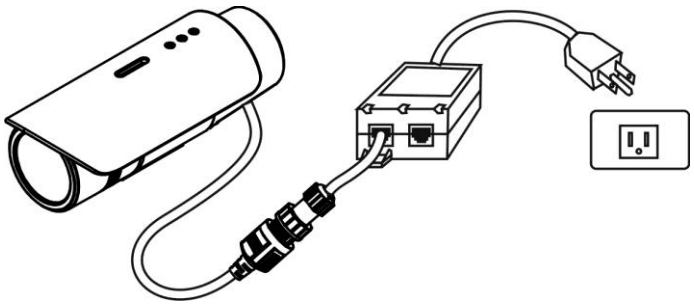


i. Use a standard RJ-45 cable to connect the camera to a PoE Injector.

ii. Use a standard RJ-45 cable to connect the PoE Injector to the non-PoE switch.

iii. Use a standard power cable to connect the PoE Injector to a power outlet.

c. If using a PoE injector as power input (For GOB-100A, WOB-100A):



i. Use a standard RJ-45 cable to connect the camera to a PoE Injector.

ii. Use a standard power cable to connect the PoE Injector to a power outlet.

4.3 System Requirements

Operating System:
Microsoft Windows XP Home Edition SP2
Microsoft Windows XP Professional SP2

Computer:
IBM PC/AT Compatible

CPU:
Pentium 3GHz or faster

Memory:
1024 MB or more

Monitor:
1024 x 768 pixels or more, 24-bit True color or better

Network Interface:
10/100Mbps Network interface card must be installed

Web Browser:
Microsoft Internet Explorer 6.0 SP2 or higher

Adobe Reader:
Adobe Reader 8.0 or higher

Audio:
The audio function will not work if a sound card is not installed in the PC. Audio may be interrupted depending on network traffic.

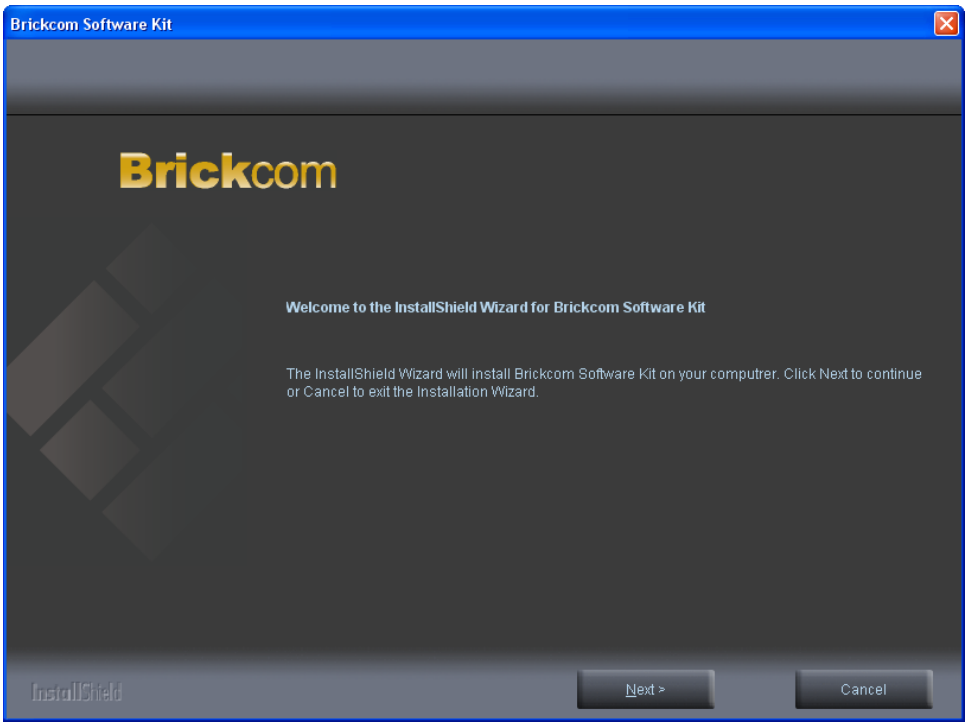
4.4 Software Installation

In this manual, "User" refers to whoever has access to the Network Camera, and "Administrator" refers to the person who can configure the camera and grant user access to the camera.

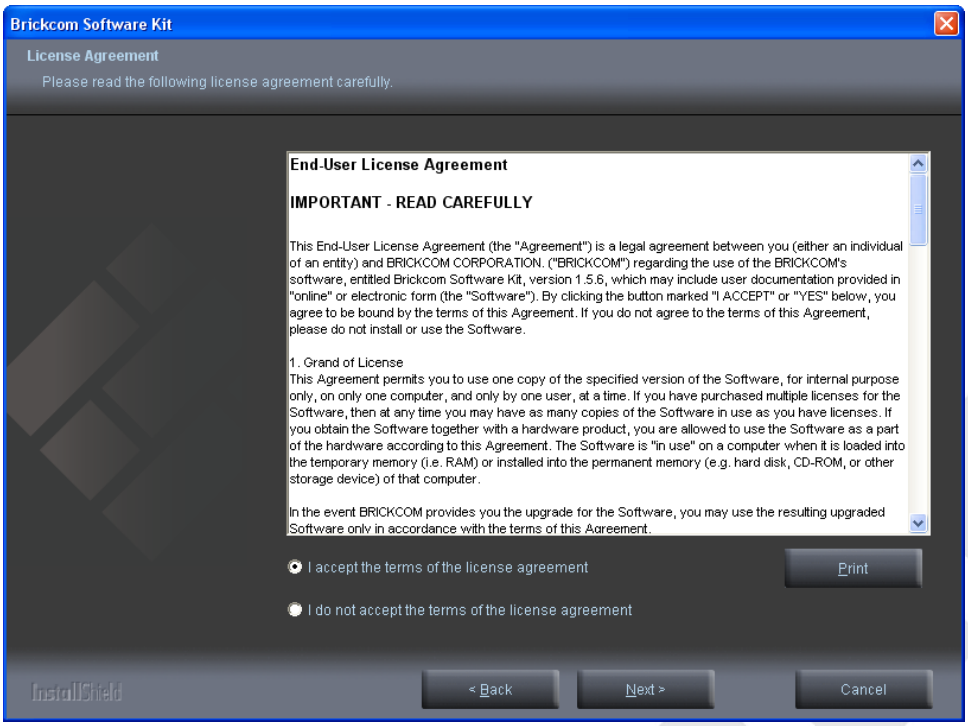
After checking the hardware connection, run the Installation Wizard program included on the product's CDROM to automatically search the intranet for the camera. There may be many cameras on the local network. Differentiate the cameras using the serial number which is printed on the labels on the carton and the bottom of the camera.

A. Insert the Installation CD into the CD-ROM driver. Run Auto-Run Tool directly from the CD-ROM to start the installation. When installing the Brickcom software kit for the first time, select a desired language for the interface. The available languages are listed in the scroll box. Click <**Install**> and follow the steps to install the EasyConfig wizard on the desired computer.

B. In the Install Shield Wizard dialog box, click <Next> to continue.


Brickcom Software Kit
Brickcom
Welcome to the InstallShield Wizard for Brickcom Software Kit
The InstallShield Wizard will install Brickcom Software Kit on your computrer. Click Next to continue or Cancel to exit the Installation Wizard.
InstallShield
Next >
Cancel

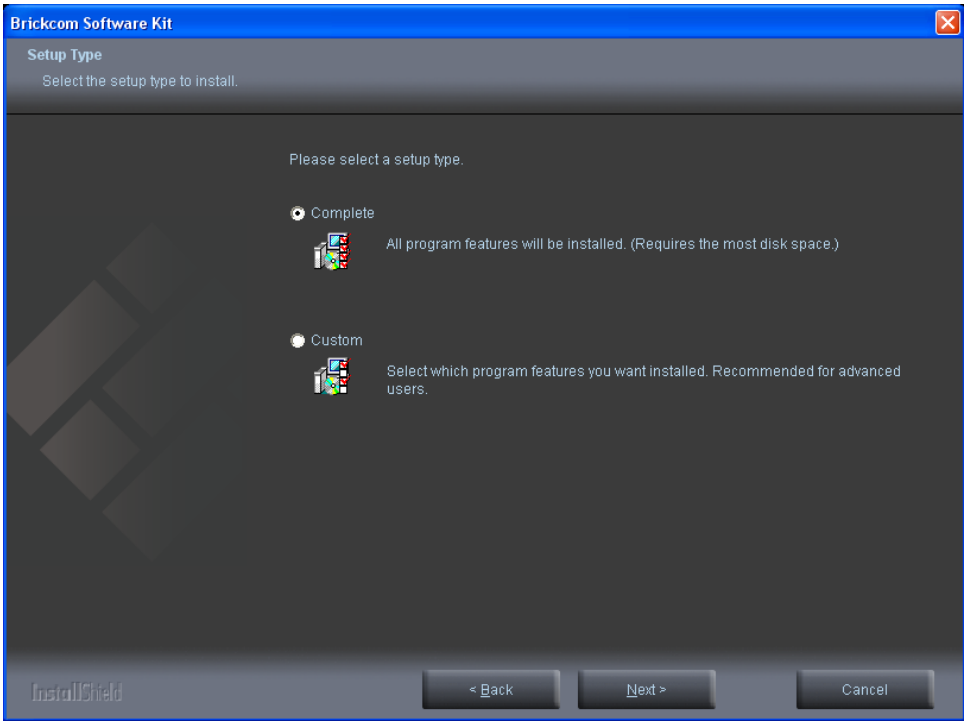
C. Read the End-User License Agreement and check the option “I accept the terms of the license agreement”. Click <Next> to continue.


Brickcom Software Kit
License Agreement
Please read the following license agreement carefully.
End-User License Agreement
IMPORTANT - READ CAREFULLY
This End-User License Agreement (the "Agreement") is a legal agreement between you (either an individual of an entity) and BRICKCOM CORPORATION. ("BRICKCOM") regarding the use of the BRICKCOM's software, entitled Brickcom Software Kit, version 1.5.6, which may include user documentation provided in "online" or electronic form (the "Software"). By clicking the button marked "I ACCEPT" or "YES" below, you agree to be bound by the terms of this Agreement. If you do not agree to the terms of this Agreement, please do not install or use the Software.
1. Grand of License
This Agreement permits you to use one copy of the specified version of the Software, for internal purpose only, on only one computer, and only by one user, at a time. If you have purchased multiple licenses for the Software, then at any time you may have as many copies of the Software in use as you have licenses. If you obtain the Software together with a hardware product, you are allowed to use the Software as a part of the hardware according to this Agreement. The Software is "in use" on a computer when it is loaded into the temporary memory (i.e. RAM) or installed into the permanent memory (e.g. hard disk, CD-ROM, or other storage device) of that computer.
In the event BRICKCOM provides you the upgrade for the Software, you may use the resulting upgraded Software only in accordance with the terms of this Agreement.
I accept the terms of the license agreement
I do not accept the terms of the license agreement
Print
InstallShield
< Back
Next >
Cancel

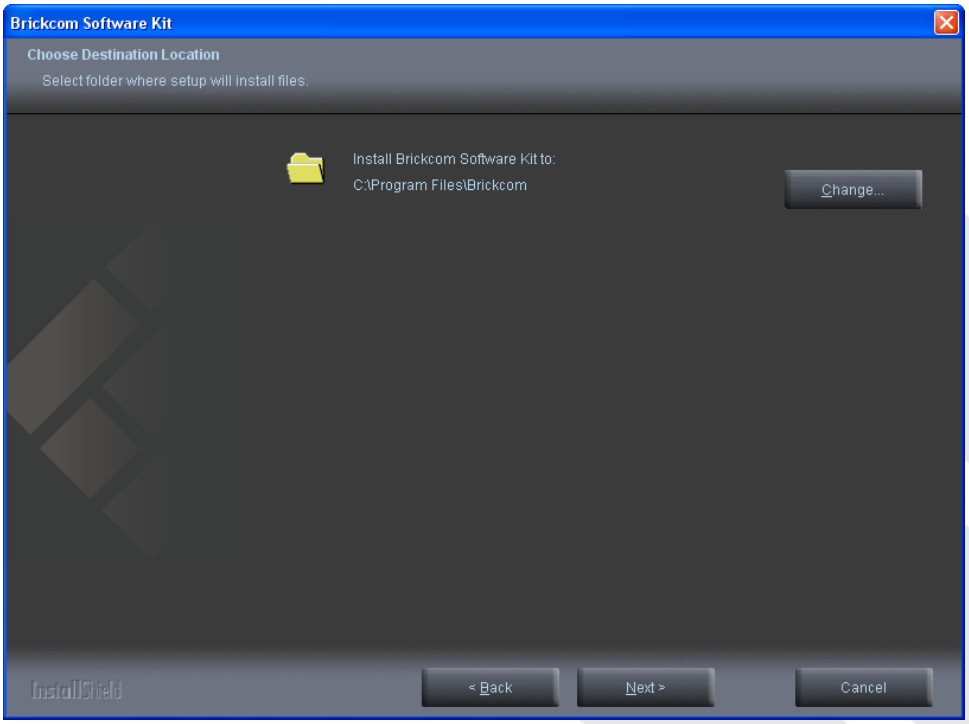
D. Select either “Complete” setup or “Custom” setup to install the system.

a. If COMPLETE SETUP is selected:

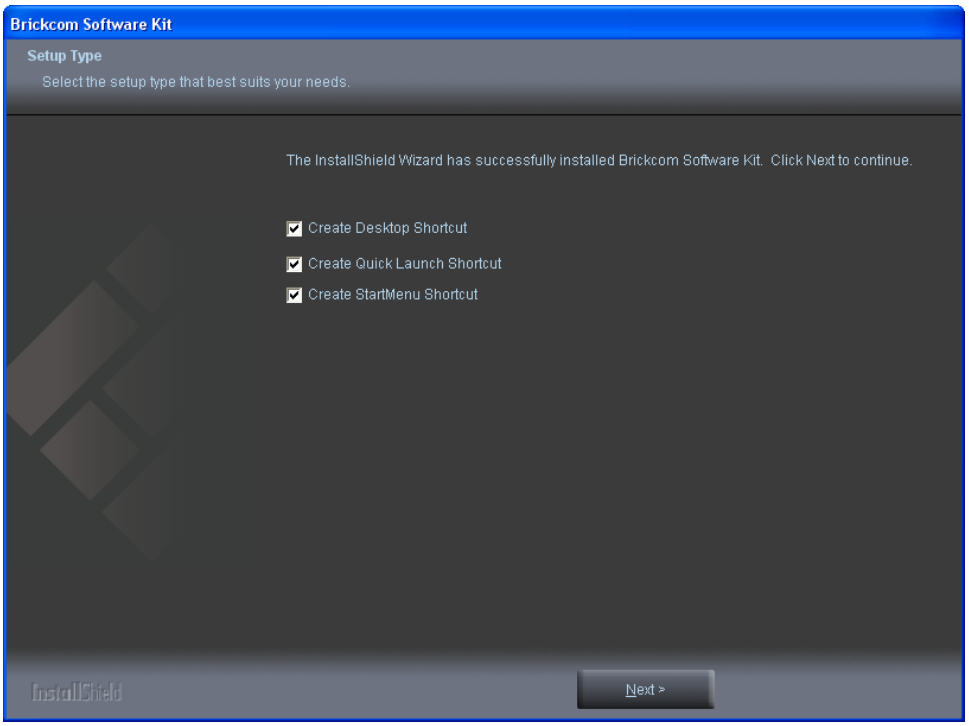
i. **All program features** will be installed into the default directory. Check the option “**Complete**” and then click <Next>.


Brickcom Software Kit
Setup Type
Select the setup type to install.
Please select a setup type.
Complete
All program features will be installed. (Requires the most disk space.)
Custom
Select which program features you want installed. Recommended for advanced users.
InstallShield
< Back
Next >
Cancel

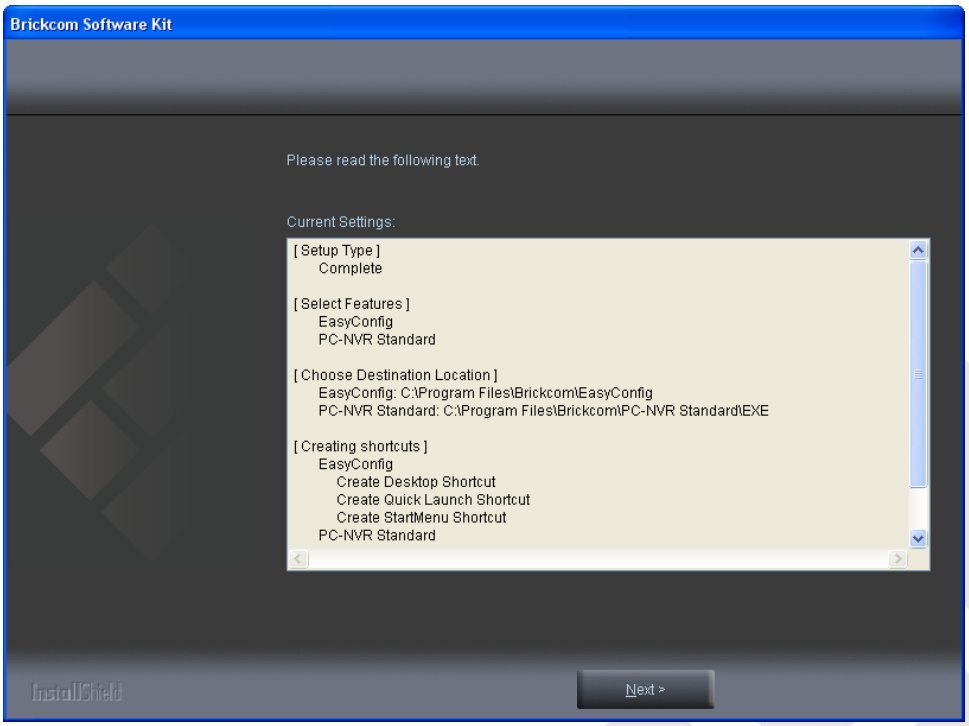
ii. Click <Change> to change the appointed folder where installation and program files will be stored. Click <Next> to continue.



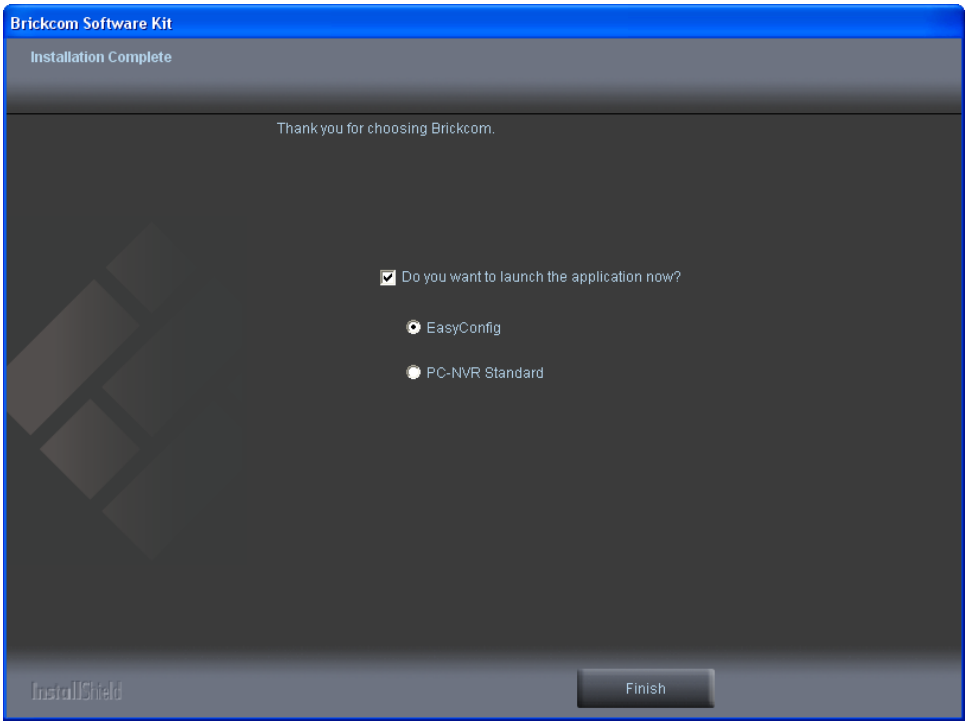
iii. Select to create shortcuts. Click <Next> to continue.


Brickcom Software Kit
Setup Type
Select the setup type that best suits your needs.
The InstallShield Wizard has successfully installed Brickcom Software Kit. Click Next to continue.
Create Desktop Shortcut
Create Quick Launch Shortcut
Create StartMenu Shortcut
InstallShield
Next »

iv. The installation information will be displayed. Click <Next> to continue.



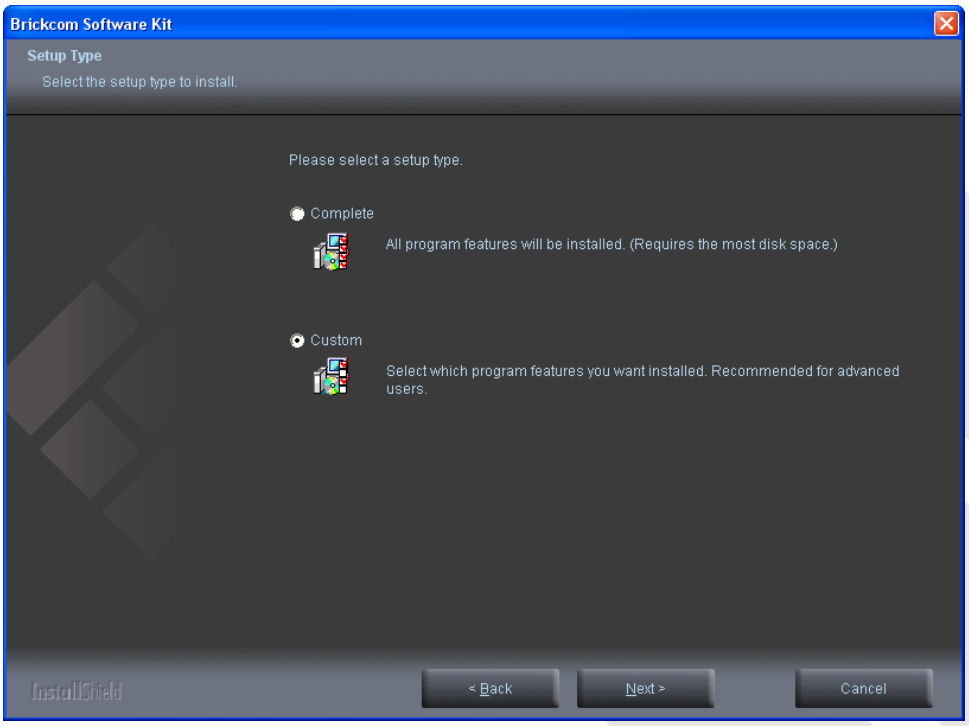
v. To launch EasyConfig or PC-NVR Standard, select the application and click <Finish>. When launching the PC-NVR program, please refer to the PC-NVR user manual.



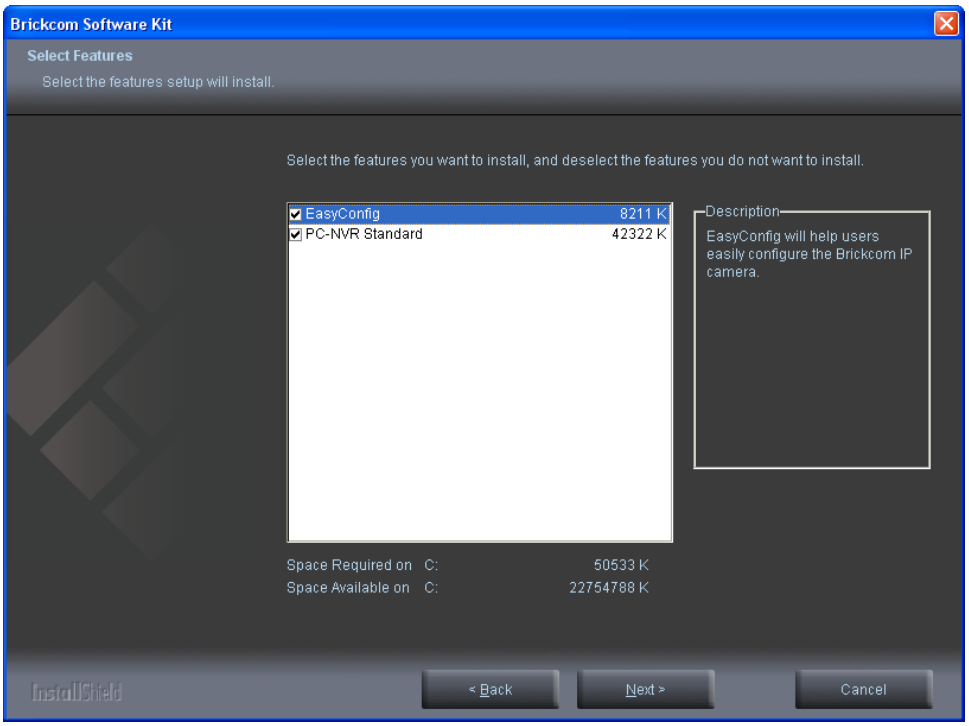
b. If CUSTOM SETUP is selected:

i. This option is recommended for advanced users. It can be used to install the system to a preferred directory or to select specific program feature(s).

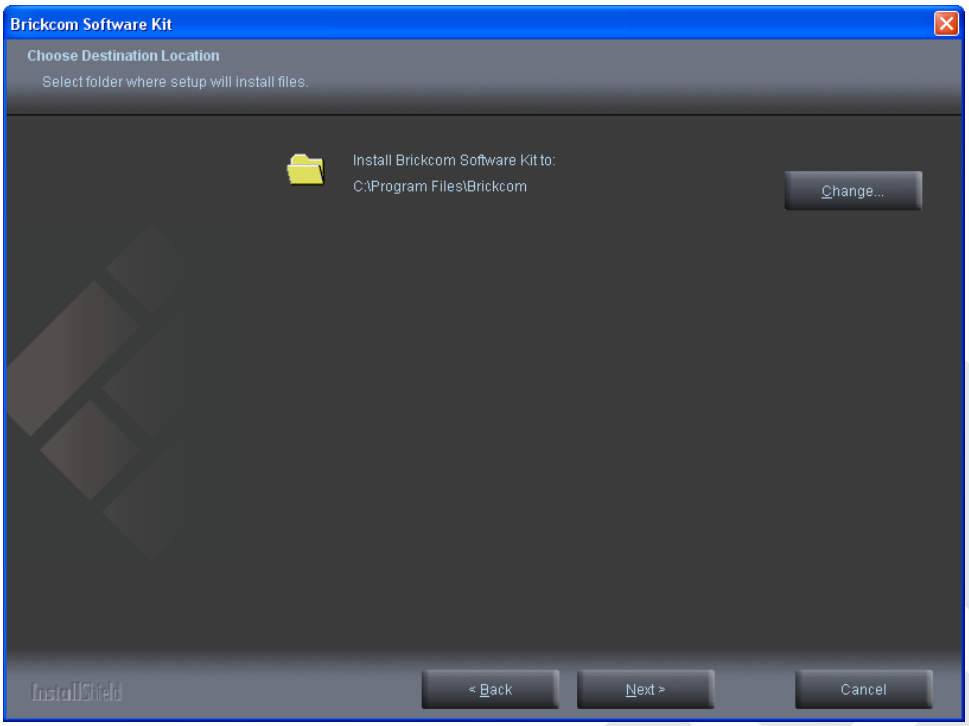
ii. Check the option “Custom”, and then click <Next>.


Brickcom Software Kit
Setup Type
Select the setup type to install.
Please select a setup type.
Complete
All program features will be installed. (Requires the most disk space.)
Custom
Select which program features you want installed. Recommended for advanced users.
InstallShield
< Back
Next >
Cancel

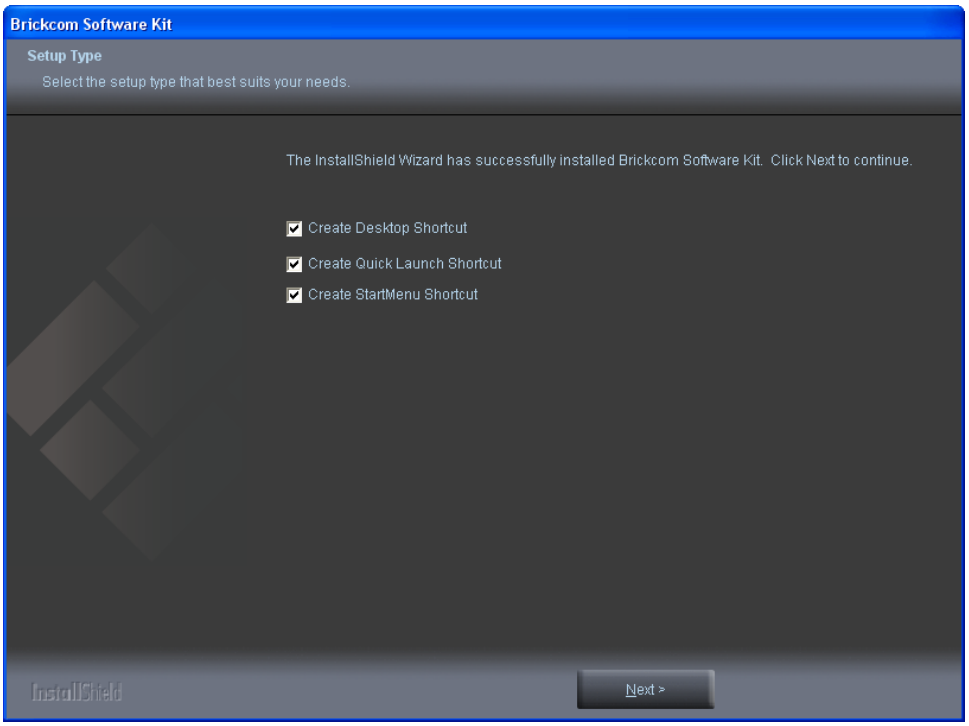
iii. Select the features to install. Click <Next> to continue.


Brickcom Software Kit
Select Features
Select the features setup will install.
Select the features you want to install, and deselect the features you do not want to install.
EasyConfig 8211 K
PC-NVR Standard 42322 K
Description
EasyConfig will help users easily configure the Brickcom IP camera.
Space Required on C: 50533 K
Space Available on C: 22754788 K
InstallShield
< Back
Next >
Cancel

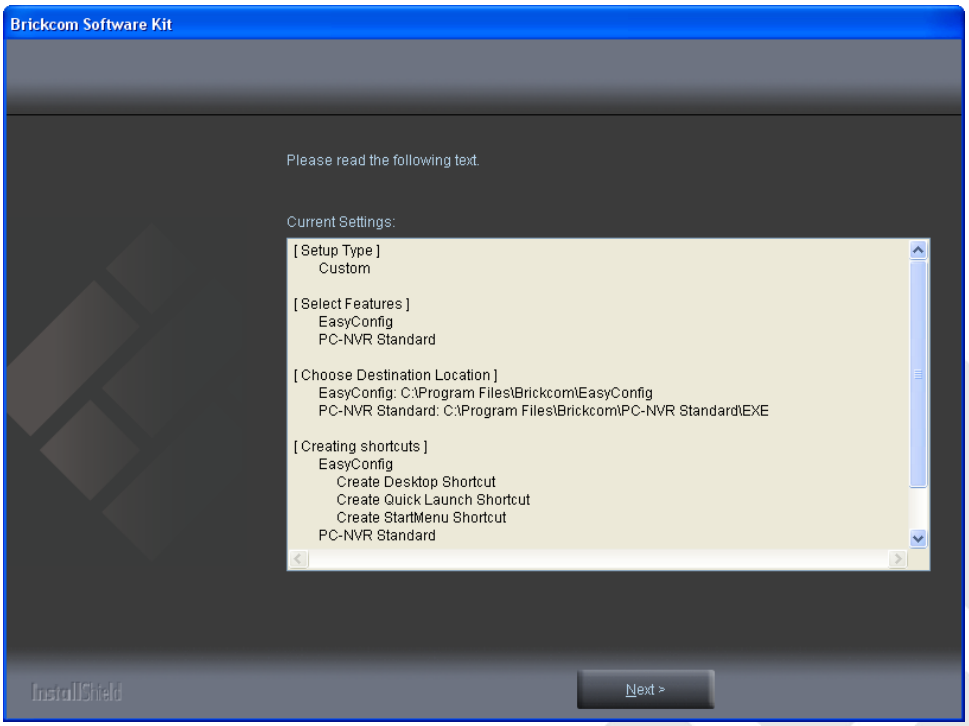
iv. Click <Change> to change the appointed folder where installation and program files will be stored. Click <Next> to continue.



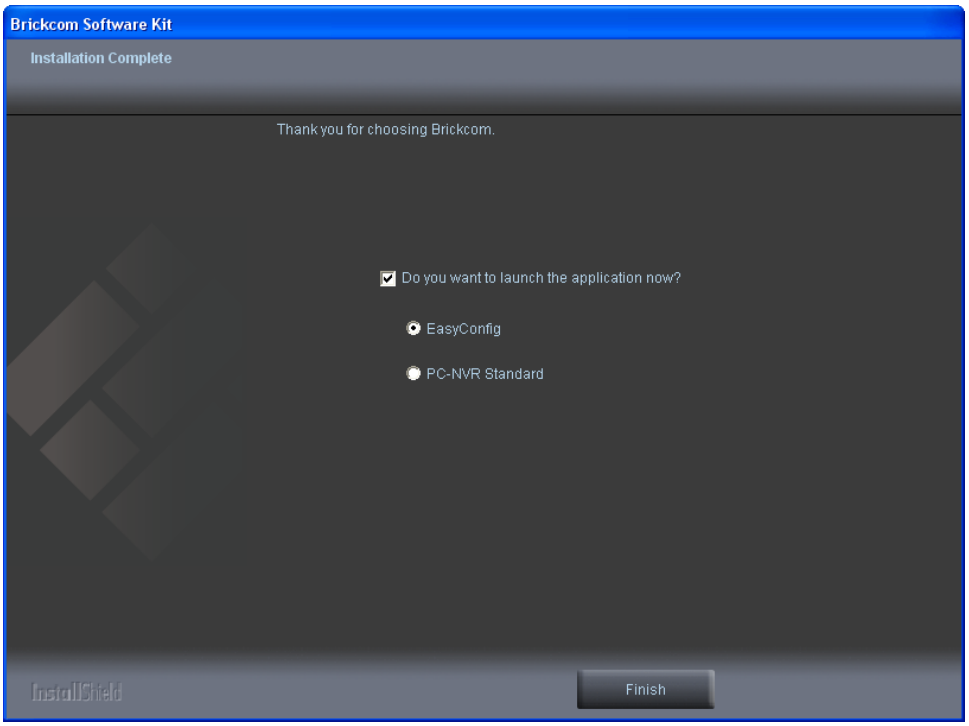
v. Select programs to create shortcuts. Click <Next> to continue.


Brickcom Software Kit
Setup Type
Select the setup type that best suits your needs.
The InstallShield Wizard has successfully installed Brickcom Software Kit. Click Next to continue.
Create Desktop Shortcut
Create Quick Launch Shortcut
Create StartMenu Shortcut
InstallShield
Next »

vi. The installation information will be displayed. Click <Next> to continue.

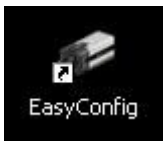


E. To launch EasyConfig or PC-NVR Standard, select the application and click <Finish>. When launching the PC-NVR program, please refer to the PC-NVR user manual.



4.3.1 EasyConfig

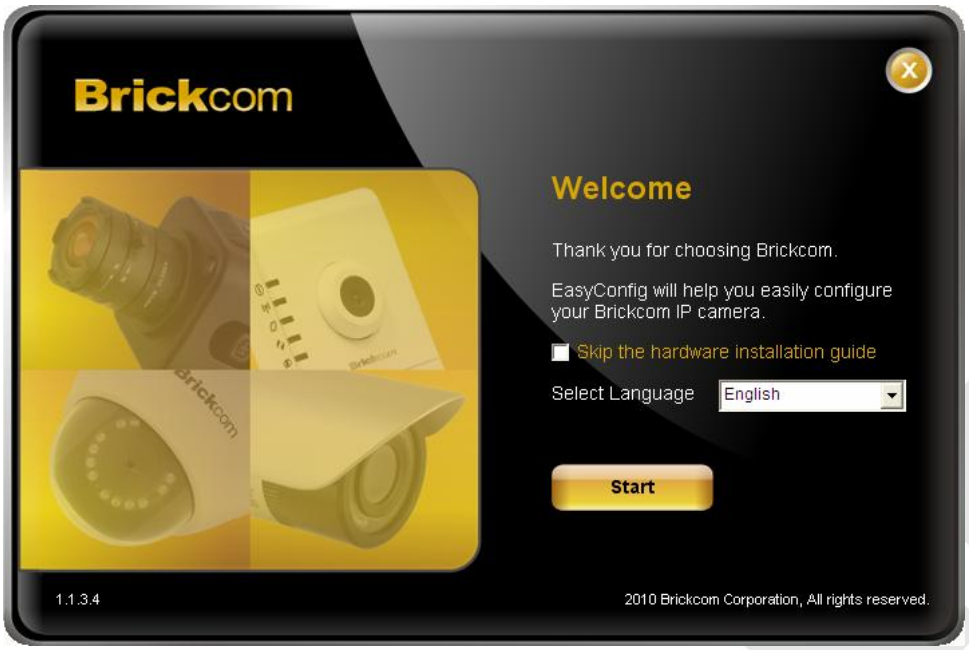
To launch EasyConfig, select EasyConfig from the start menu. If Complete Setup type was used in the software installation, an EasyConfig icon was installed on the desktop. Double click to open the icon.

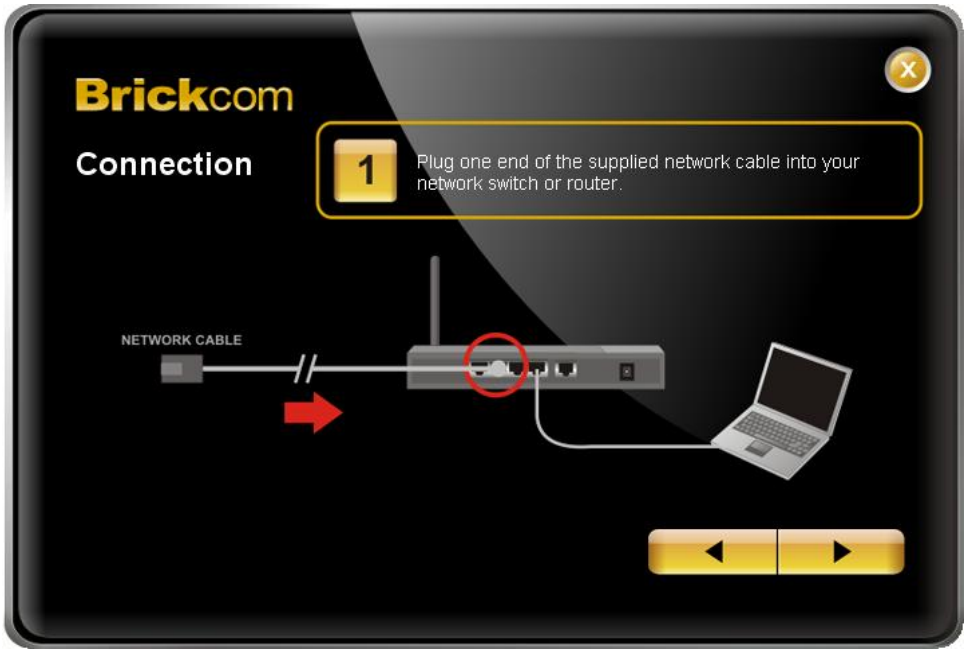


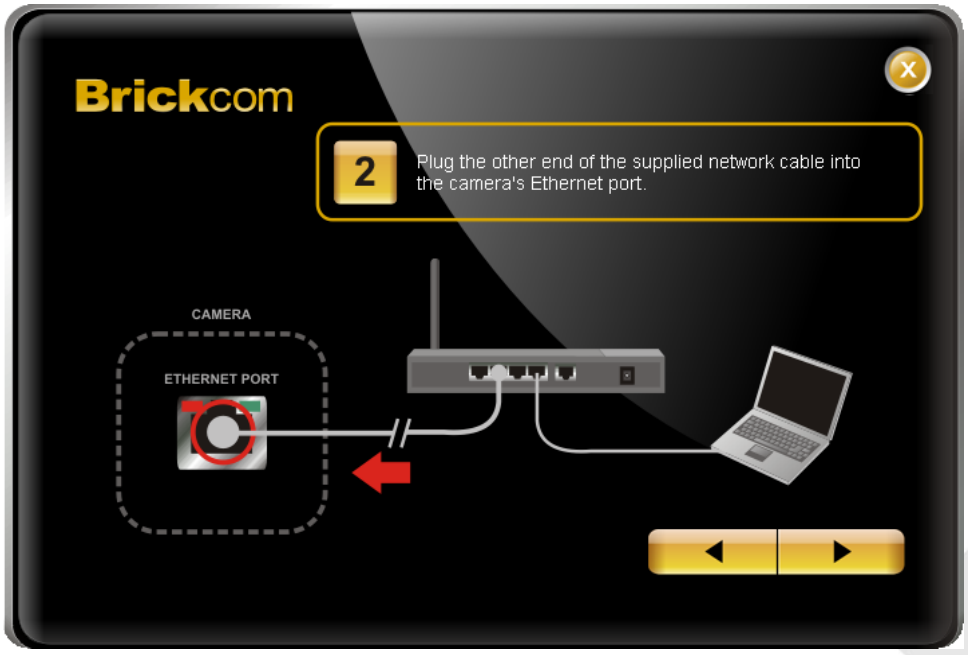
If Custom Setup type was used in the software installation and an EasyConfig icon was not installed on the desktop, the program will be installed under C:\Program Files\Brickcom\EasyConfig unless the program was saved to a preferred directory.

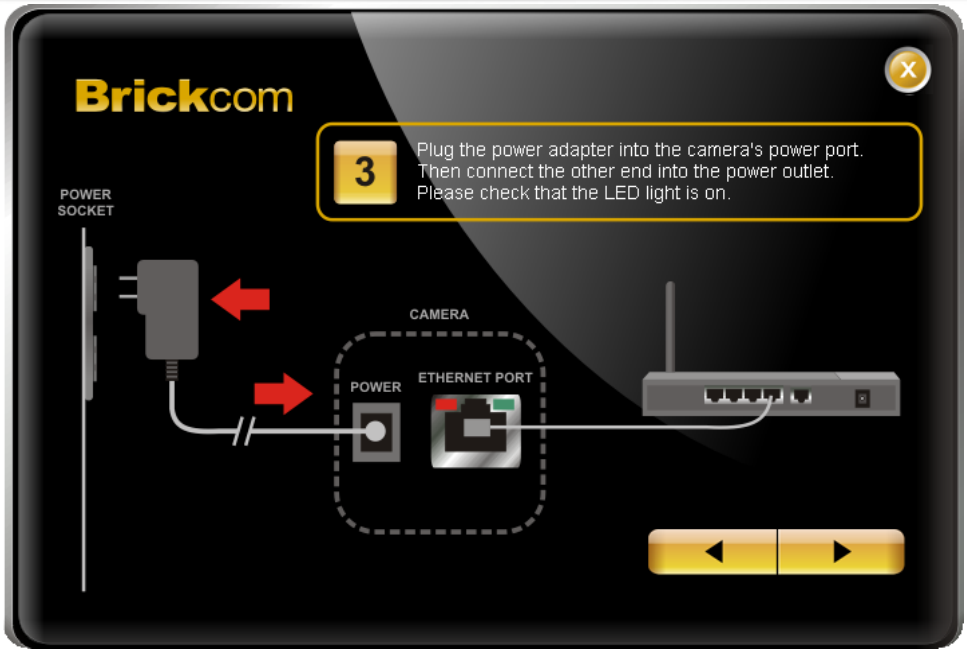
A. Click <Start> to continue. The program will automatically search for the camera in the intranet.

NOTE - Check “Skip the hardware installation guide” to skip checking the hardware connection. To check the hardware installation settings, do not check the option box.

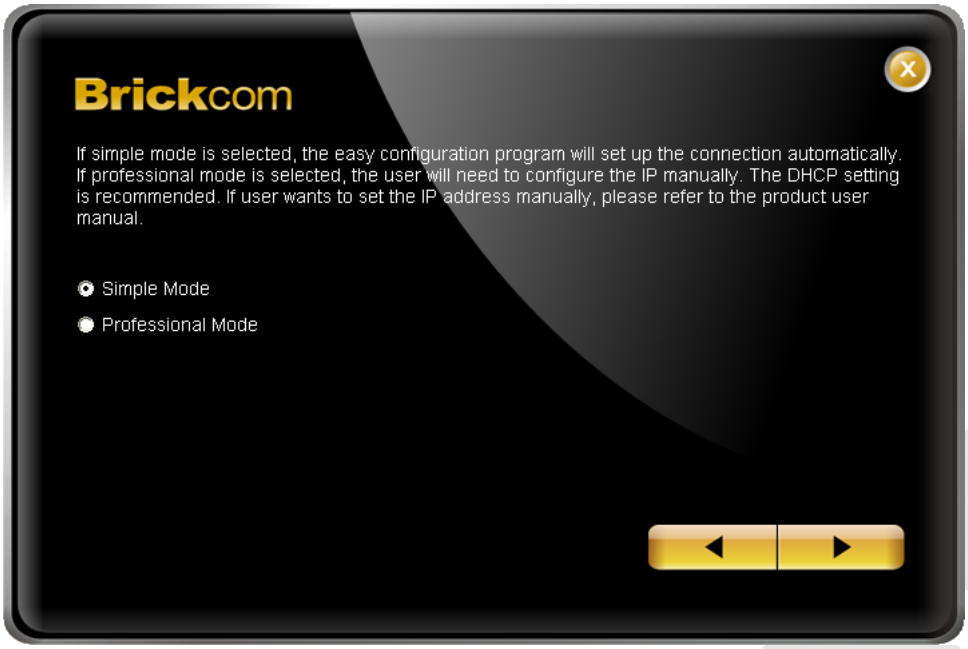



Brickcom
Connection
1
Plug one end of the supplied network cable into your network switch or router.
NETWORK CABLE


Brickcom
2
Plug the other end of the supplied network cable into the camera's Ethernet port.
CAMERA
ETHERNET PORT



B. Select either “Simple Mode” or “Professional Mode” to obtain the camera’s IP settings. If “Simple Mode” is selected, EasyConfig will set up the connection automatically. If “Professional Mode” is selected, the user will need to configure the IP settings manually.


Brickcom
If simple mode is selected, the easy configuration program will set up the connection automatically. If professional mode is selected, the user will need to configure the IP manually. The DHCP setting is recommended. If user wants to set the IP address manually, please refer to the product user manual.
Simple Mode
Professional Mode

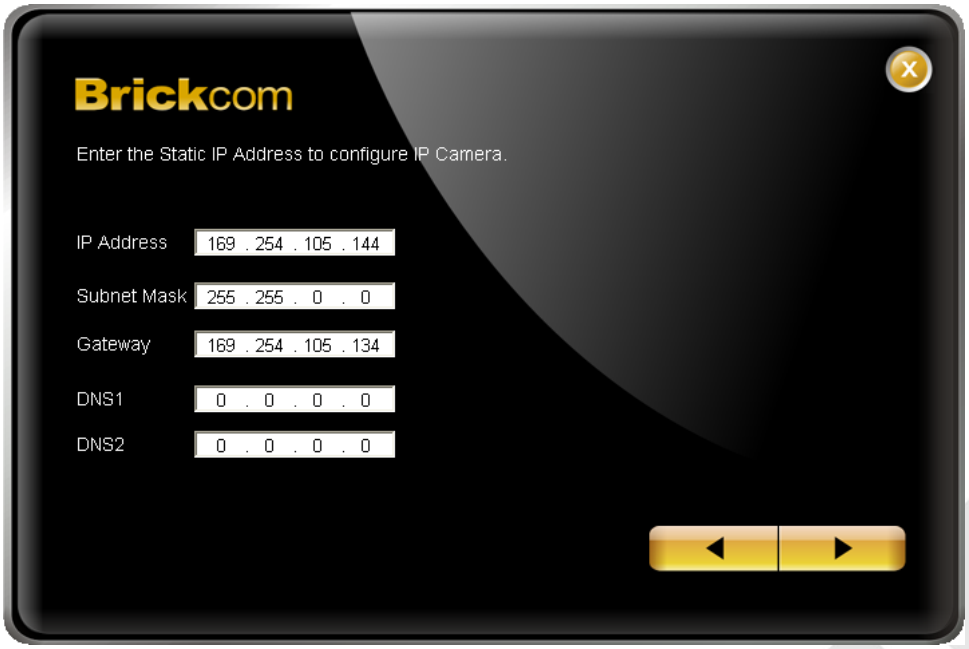
C. There may be many cameras in the local network. Differentiate the cameras using their UPnP name. Double click on the camera from the survey list to connect.

D. For configuring the IP address settings, select either <Settings remain the same>, <Automatically obtain an IP Address (DHCP)> or <Set IP Address configuration manually>. The DHCP setting is recommended.

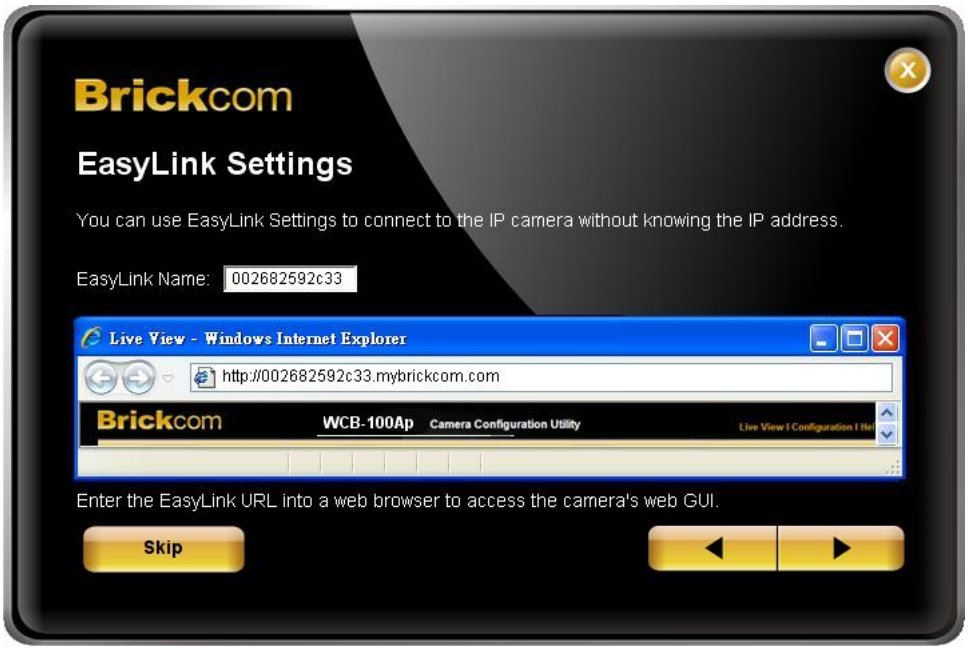
Brickcom
Select the IP Address settings.
Settings remain the same
Automatically obtain an IP Address (DHCP)
Set IP Address configuration manually

If <Set IP Address configuration manually> is selected, the following pages will be displayed.

Brickcom
Select the IP Address settings.
Settings remain the same
Automatically obtain an IP Address (DHCP)
Set IP Address configuration manually


Brickcom
Enter the Static IP Address to configure IP Camera.
IP Address 169 . 254 . 105 . 144
Subnet Mask 255 . 255 . 0 . 0
Gateway 169 . 254 . 105 . 134
DNS1 0 . 0 . 0 . 0
DNS2 0 . 0 . 0 . 0

E. **If the camera supports the EasyLinkTM function**, the following page **will** be displayed. Otherwise, this page **will not** be shown. *If desired, click <Skip> to skip this setting.


Brickcom
EasyLink Settings
You can use EasyLink Settings to connect to the IP camera without knowing the IP address.
EasyLink Name: 002682592c33
Live View - Windows Internet Explorer
http://002682592c33.mybrickcom.com
Brickcom
WCB-100Ap
Camera Configuration Utility
Enter the EasyLink URL into a web browser to access the camera's web GUI.
Skip

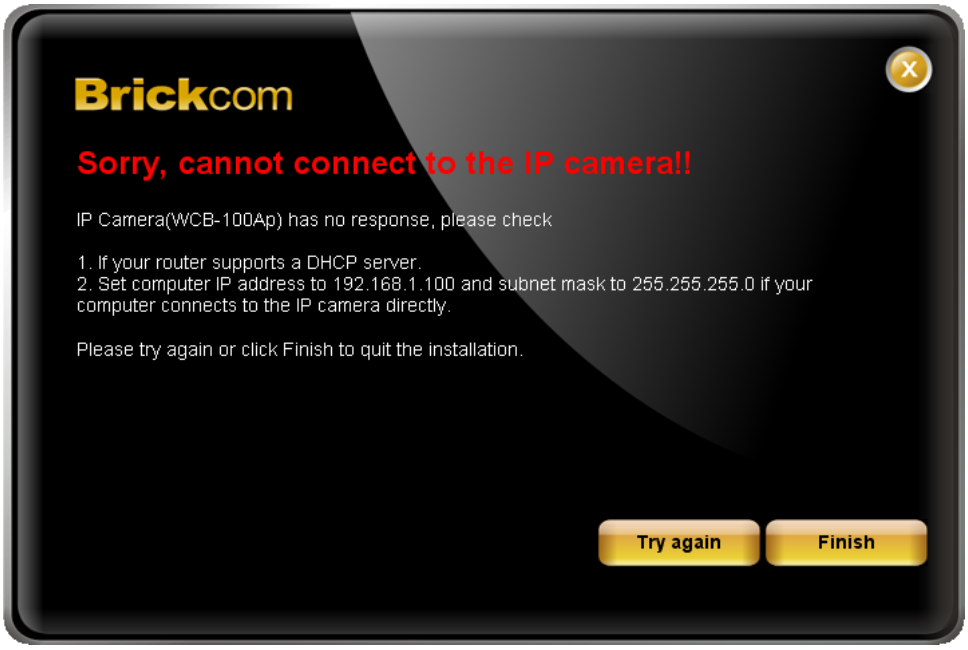
EasyLinkTM is a unique Brickcom function which allows users to assign a unique EasyLink name to their network camera's IP address. There is no need to configure the router to open up ports or remember hard-to-memorize IP addresses. Users can log onto [uniqueEasyLinkname].mybrickcom.com to view the camera's web GUI and live view.

a. Enter a unique EasyLink name whose length must be between 5-32 characters.

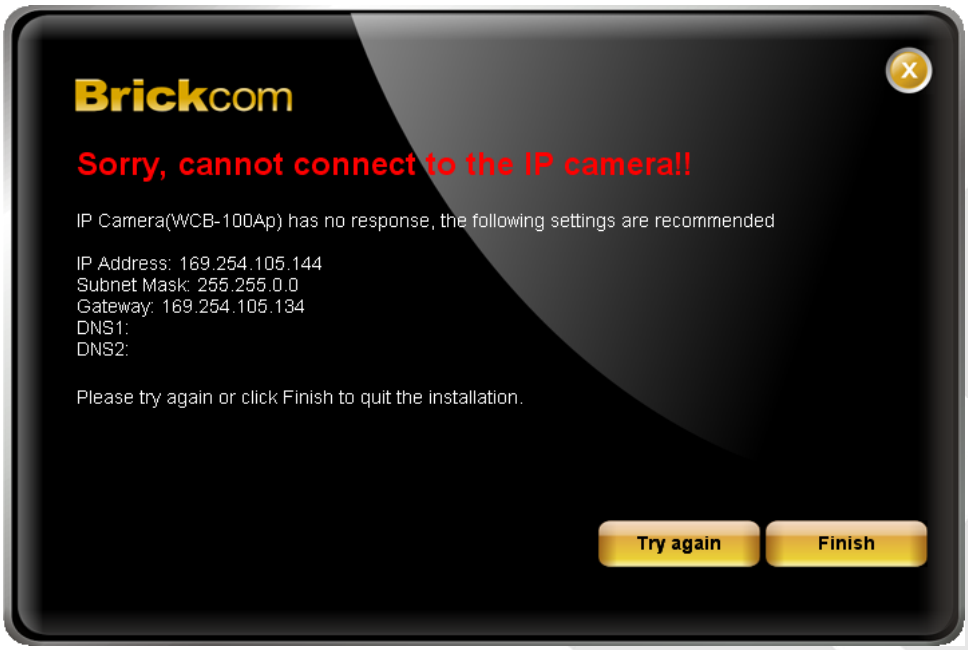
b. When finished, click the arrow button to continue.

F. When the IP address settings have been configured, the screen will either display a successful or failed connection message. If the connection failed, either try again or quit the installation.

a. If “DHCP IP address settings” was selected, the failure page will be displayed as below:


Brickcom
Sorry, cannot connect to the IP camera!!
IP Camera(WCB-100Ap) has no response, please check
1. If your router supports a DHCP server.
2. Set computer IP address to 192.168.1.100 and subnet mask to 255.255.255.0 if your computer connects to the IP camera directly.
Please try again or click Finish to quit the installation.
Try again
Finish

b. If “Static IP address settings” was selected, the failure page will be displayed as below:



c. If the connection was successful, the user will see the message: “Congratulations. The installation of the camera is complete.”

When this window is displayed, click <PC-NVR> to start the PC-NVR program, <Live View> to view the live video from the connected IP camera, or <X> in the top right corner of the screen to close the installation window. If the user starts the PC-NVR program, please refer to the PC-NVR user manual.

Once installation is complete, the Administrator should proceed to the next section "Accessing the Network Camera" for necessary changes and configurations.

Chapter 5 - Accessing the Network Camera

5.1 Check Network Settings

The camera can be connected either before or immediately after the software installation. The Administrator should complete the network settings on the configuration page, including entering the correct subnet mask and IP address of gateway and DNS. Ask the network administrator or Internet service provider for the detail information.

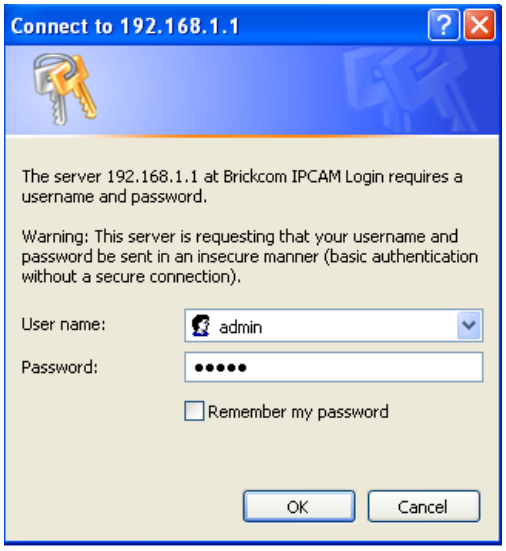
5.2 Add Password to Prevent Unauthorized Access

The Administrator should immediately implement a new password as a matter of prudent security practice. For first time use, the user name and password for the Administrator are assigned as "**admin/admin**". After the Administrator changes the Administrator password, the web browser will display an authentication window to confirm the new password. **Once the password is set, there is no provision to recover the Administrator's password. If the Administrator's password is lost, the only option is to restore the original factory default settings.**

The Administrator can set up a maximum of ten (10) user accounts. Users will be able to access the Network Camera, but will not be allowed to access system configurations.

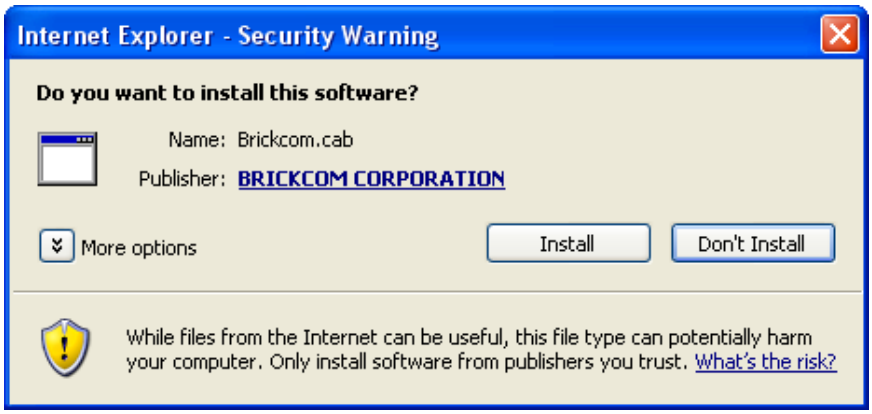
5.3 Authentication

To access the camera's live view, open a web browser and enter the IP address of the camera. A dialog window will pop requesting a username and password. As stated on the previous page, for the default username and password for the Administrator are assigned as "**admin/admin**". For accounts other than the administrator's account, the user can choose to remember the password for future convenience. It is not recommended to check this box when viewing the camera feed from a public computer.


Connect to 192.168.1.1
The server 192.168.1.1 at Brickcom IPCAM Login requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name:
admin
Password:
Remember my password
OK
Cancel

5.4 Installing the Plug-In

For the initial access to the camera in Windows, the web browser may prompt the administrator for permission to install a new plug-in for on Internet Explorer. Permission request depends on the Internet security settings of the user's PC or notebook. If the highest security level is set, the computer may prohibit any installation and execution attempt. This plug-in has been registered for certificate and is used to display the video in the browser. Click "Install" to proceed. If the web browser does not allow the administrator to continue the installation, check the Internet security option and lower the security levels or contact the networking supervisor or IT for help.


Internet Explorer - Security Warning
Do you want to install this software?
Name: Brickcom.cab
Publisher: BRICKCOM CORPORATION
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

NOTE – If an error occurred or the plug-in fails to install, it is because the version of the Electronic Signature is newly released and the VeriSign has not been submitted to Microsoft Windows update for validation. Therefore, plug-in will not have its root certificate. If IE discovers that there is no root certificate after the user's PC connects to the camera, it will automatically redirect to VeriSign Web site to download and install the latest root certificate to make the installation successfully. If the user's computer is able to connect to camera but unable to access the internet, then the installation will fail because the computer will not be able to download the latest root certificate. This problem can be resolved if computer can be connect to the internet and the camera at the same time and will not recur when Windows update patches become available.

Chapter 6 - Live View

NOTE - (*) These are optional features. Please refer to the Product List for the full list of optional features available for the product.

Live View is the default page that opens when accessing the camera. Live video is displayed directly in the browser window.

A. Stream1/Stream2 Channels

The network camera offers simultaneous dual stream for optimized quality and bandwidth. Go to Configuration → Camera/Video/Audio → Video to configure the codec compression and video resolution or refer to the Video configuration page.

B. HTTP/TCP/UDP protocol

a. **HTTP** – This unicast method can be used to traverse firewalls. Firewalls are commonly configured to allow the HTTP protocol, thus allowing RTP to be tunneled.

b. **TCP** - This protocol guarantees the complete delivery of streaming data and provides better video quality. The downside of using this protocol is that the quality of its real-time effect is less than that of the UDP protocol.

c. **UDP** - This protocol allows for more real-time audio and video streams. However, network packets may be lost due to network burst traffic and images may be broken. Activate UDP connection time-sensitive responses are more important than video quality.

C. Camera Control Panel

a. **Brightness** - Drag the slider bar to adjust the image brightness level.

b. **Mic volume** - Drag the slider bar to adjust the microphone volume.

c. **Speaker volume** - The built-in speaker will play sound from an audio clip from the computer microphone when it is enabled.

d. **Optical Zoom (*)** – Drag the slider bar to adjust the optical zoom, and the camera will automatically focus.

For more Audio settings, please refer to the Audio configuration page.

Playor Stop - Play or stop the video.

Recording - Record video to a computer.

Snapshot - Capture and save still images.

Digital Zoom - Enable the digital zoom operation

Mirror - Horizontally reflect the display of the live video.

Flip - Vertically reflect the display of the live video.

Real Size - View the object in real size. Press it again to switch back to normal mode.

Full Screen - Switch to full screen mode. Press the “Esc” key to return to normal mode.

Motion Detection Alert - Enable the motion detection alert function.

Mute – Turn off the sound.

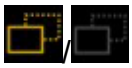
Talk(*) – To communicate through the camera using the computer MIC.

Set Default – Reset to default settings.

Recording on/off - Displays the status of recording video

MIC on /off - Displays the status of the MIC volume

Speaker on/off - Displays the status of the Speaker



MD on/off - Displays the status of Motion Detection

NOTE - The <Camera Control Panel> functions have no effect on the recorded video. Whatever changes are made to the <Camera Control Panel> **will not** be applied to the recorded video.

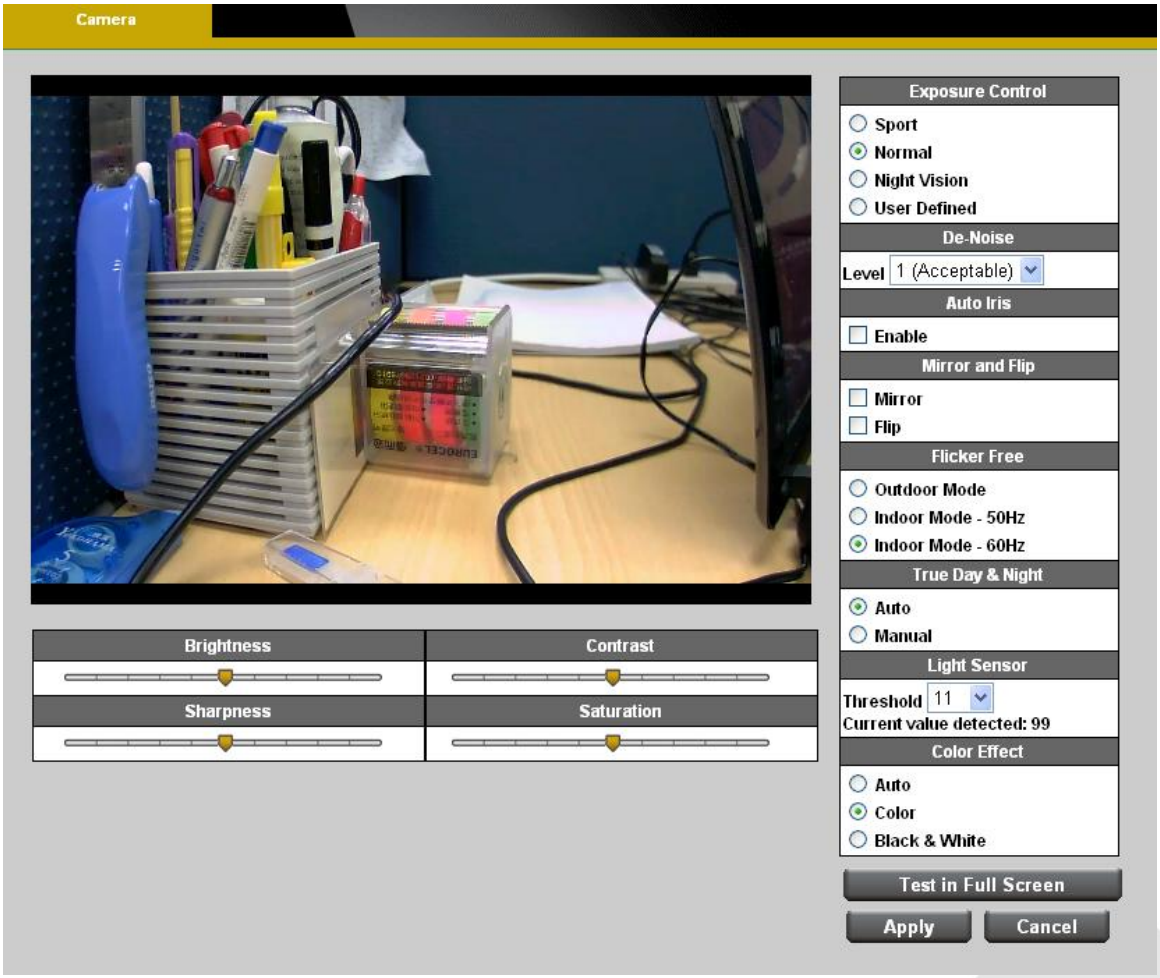
Chapter 7 - Configuration

Click <**Configuration**> on the main page to change the camera settings pages.

NOTE - Only Administrators can access the Configuration page.

7.1Camera/Video/Audio

7.1.1 Camera



a. **Brightness** - Drag the slider bar to adjust the image brightness level from -5 to +5.
b. **Contrast** - Drag the slider bar to adjust the image contrast level from -5 to +5.
c. **Sharpness** - Drag the slider bar to adjust the image sharpness level from -5 to +5.
d. **Saturation** - Drag the slider bar to adjust the image saturation level from -5 to +5.

A. Exposure Control

a. **Sport** - Select this option when monitoring rapid moving objects.

b. **Normal** - Select this option for normal monitoring conditions.

c. **Night Vision** - Select this option when monitoring at night or in low light conditions.

d. **User Defined** - Select this option to define the exposure manually.

i. **AGC (Auto Gain Control)** - The AGC can be set between 1X to 5X. Set the Gain Rate higher for a better video illumination, with 5X giving the best video illumination.

NOTE - higher gain rate may cause a higher judder or blur on fast moving images.

ii. **Shutter Speed**
Fast - For high activity exposure function.
Normal - For normal exposure function.
Slow - For night vision exposure function.

iii. **AE Lock (Auto Exposure)** - The camera will automatically adjust the exposure to the changes in ambient light.

B. De-Noise

a. **Auto** - The camera will automatically filter the frame-to-frame defects to reduce the visual impact of blur.

The De-noise can be set between 1 to 3, with 3 giving the best video resolution.

C. Auto Iris

Enable when the auto Iris lens is installed. Manual Iris lens is the default lens.

D. Mirror and Flip

a. **Mirror** - Enable to horizontally reflect the display of the live video.

b. **Flip** - Enable to vertically reflect the display of the live video.

E. Flicker-Free

Eliminate the problem of flicker. Click the Radio button to select outdoor or indoor mode based on the conditions.

F. True Day & Night

a. **Auto** - The Network Camera automatically removes the filter by judging the level of ambient light.

b. **Manual** - In day mode, **enable the IR CUT** to keep the IR cut filter active at all times so the infrared light does not reach the sensor and distort the color. In night mode, **disable the IR CUT** to deactivate the IR cut filter at all times so the sensor accepts infrared light and improves low light sensitivity.

c. **IR LED** - Select this option to turn on the IR Illuminators when in low light conditions

G. Light Sensor

The light sensor uses light sensitivity to signal the camera when to activate the IR LED and switch to night mode. When the light exposure falls below the threshold, the camera will automatically switch from day to night mode. Select the threshold value from 0-255; higher threshold values raise illumination sensitivity.

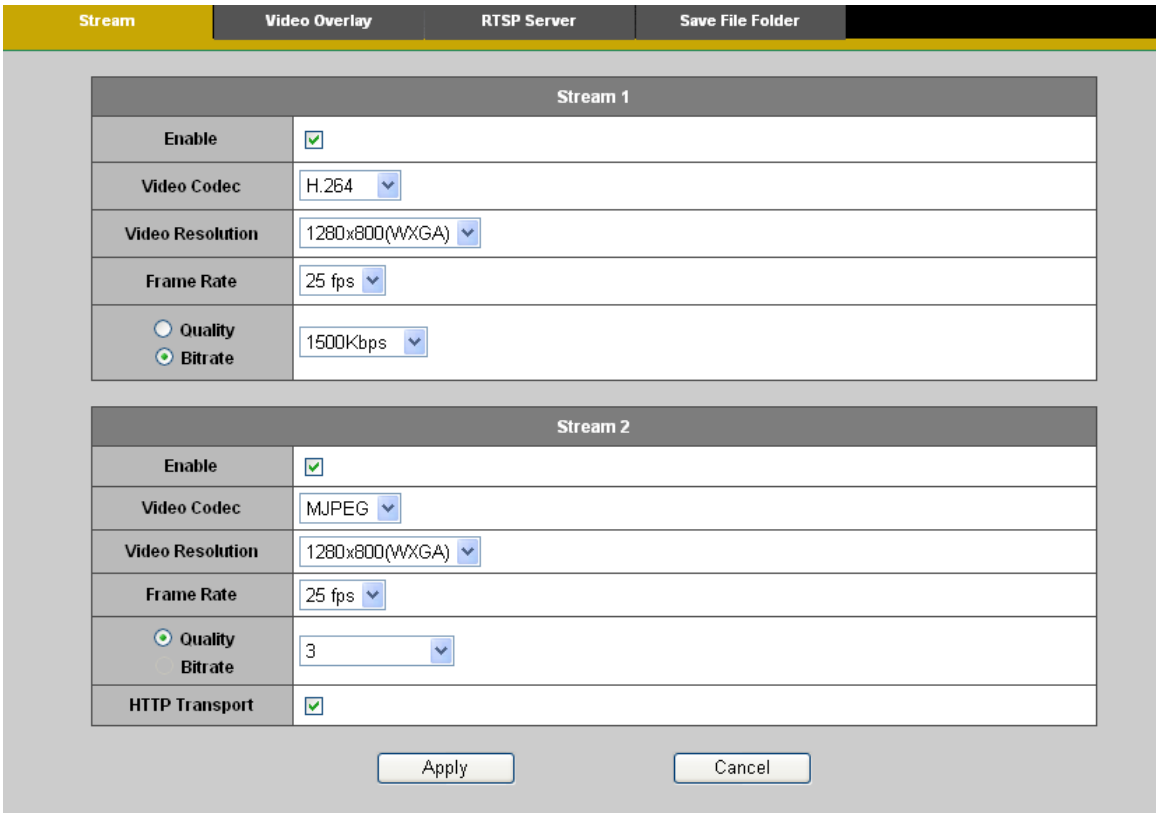
H. Color Effect

Select to display color or black and white video streams.

Click **Apply** to apply settings or **Cancel** to cancel changes.

7.1.2 Video

The Network Camera offers two separate streams for different viewing options.



A. Stream 1 & Stream 2

a. **Video Codec** - The Network Camera offers three choices of video codec standards for real-time viewing: H.264, MPEG-4 and MJPEG.

b. **Video Resolution** - Select from the drop-down menu to choose the best resolution recording settings.

c. **Frame Rate** - Select the frame rate from drop-down menu. When H.264 or MJPEG is selected, the frame rate ranges from 1 to 30 fps. When MPEG-4 is selected, the frame rate ranges from 1 to 15 fps. Set a higher frame rate for smoother video quality.

d. **Video quality and bit rate** - Choose either “quality” or “bitrate” to control the video quality with video codec at H.264 or MPEG4. Only “quality” can be chosen when video codec at MJPEG is selected. Set the bitrate higher for a better video quality.

NOTE - a higher bitrate will use higher network bandwidth. The video quality can be set between Level 1 to Level 6, with Level 6 producing the best image quality.

e. **HTTP Transport** – If MJPEG is used for Video Codec, users can enable HTTP Transport protocol for video communication.

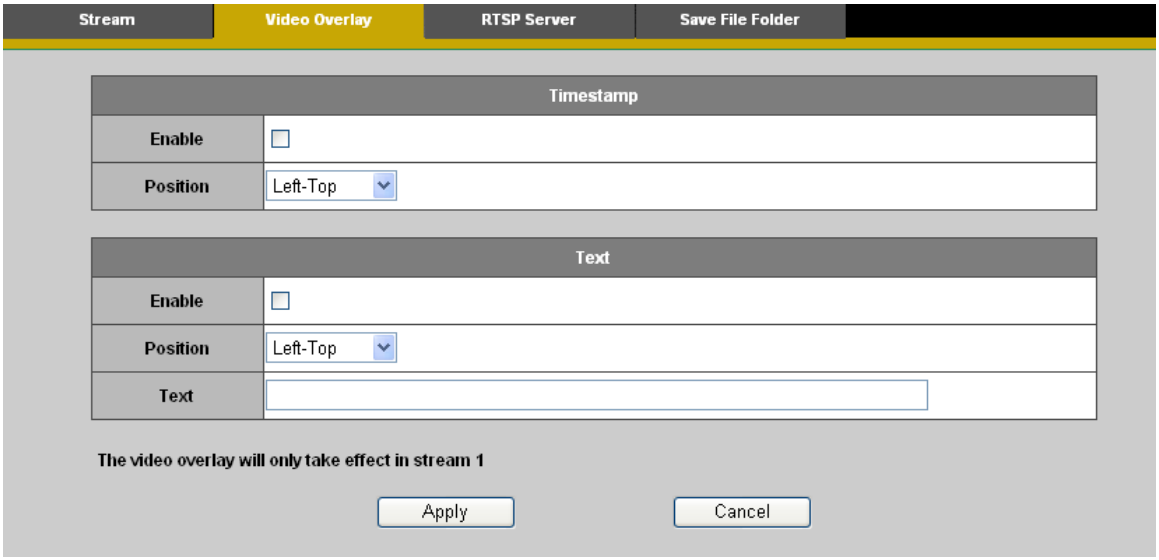
NOTE – HTTP Transport is for non-IE browser used only.

Click **Apply** to apply settings or **Cancel** to cancel changes.

NOTE – For best recording experience, configure the Network Camera to one of the following frame rates based on the Flicker-Free setting:

Flicker-Free	Frame Rate
Outdoor	25, 10, 7, 5, 3, 2
Indoor (50/60 Hz)	25, 20, 10, 7, 5, 3, 2

B. Video Overlay



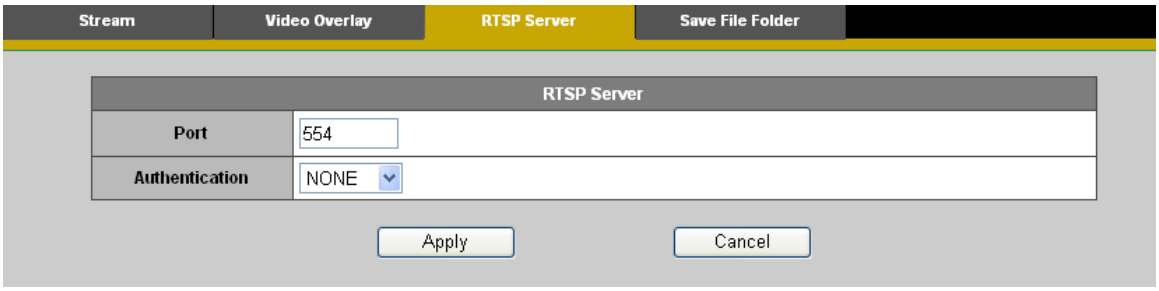
a. **Timestamp** - To display the date and time on the screen during live view, check “Enable” to enable the timestamp function and select the display position from the drop-down menu.

b. **Text** - To make a note about the camera, check “Enable” and select the display position from the drop-down menu. Enter a video description in the text box.

Click **Apply** to apply settings or **Cancel** to cancel changes.

NOTE - The video overlay will only takes effect in stream 1.

C. *RTSP Server*



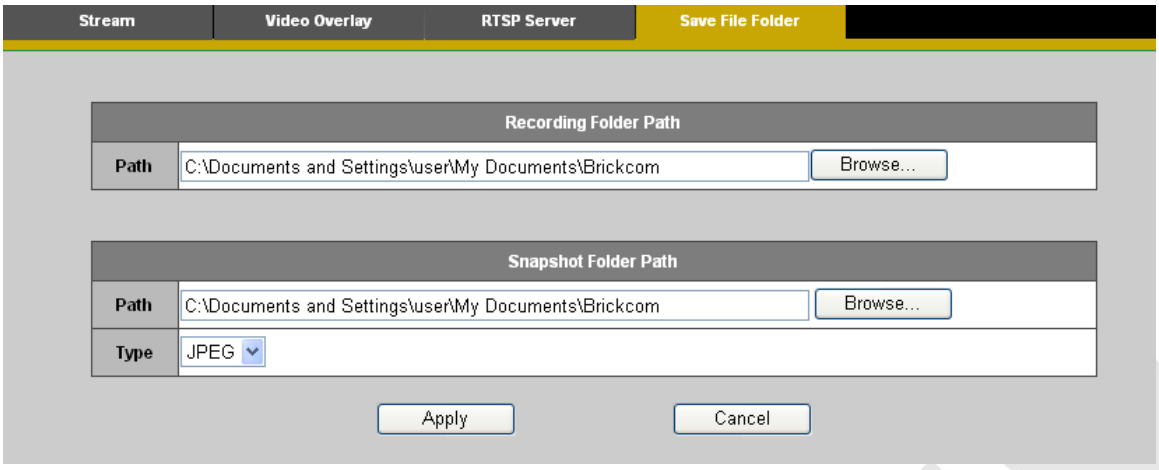
To utilize RTSP authentication, the user must first set a password for the camera. RTSP (Real-Time Streaming Protocol) controls the delivery of streaming media. By default the port number is set to 554.

a. **Authentication** - Depending on the network security requirements, the camera provides two types of security settings for streaming via RTSP protocol: NONE and DIGEST.

   If DIGEST authentication is selected, user credentials are encrypted using MD5 algorithm, thus providing better protection against unauthorized access.

Click **Apply** to apply settings or **Cancel** to cancel changes.

D. *Save File Folder*



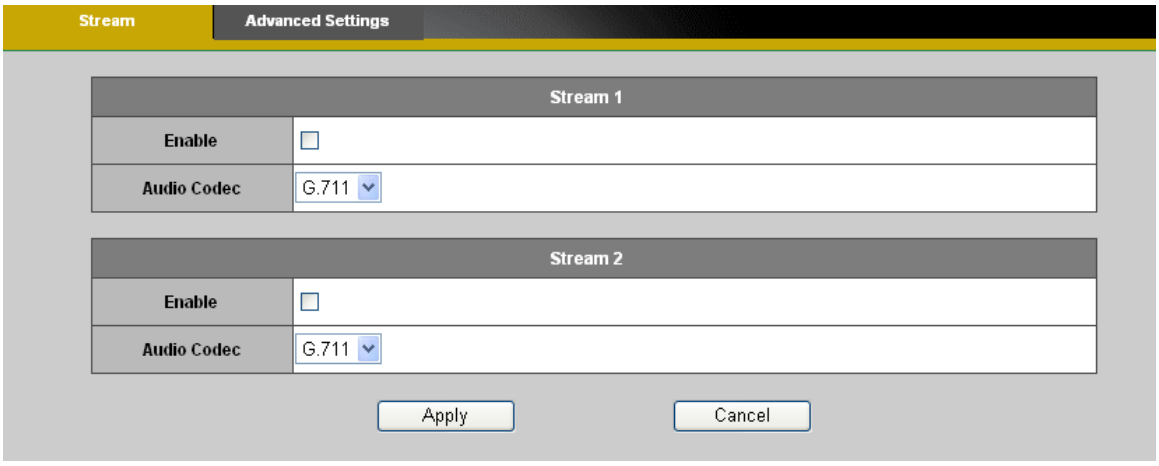
a. **Recording folder path** - The destination for saving the recording video files. Click Browse to specify the saving path.

b. **Snapshot folder path** - The destination for saving the snapshot files. Click Browse to specify the saving path and select the format from the drop-down menu.

Click **Apply** to apply settings or **Cancel** to cancel changes.

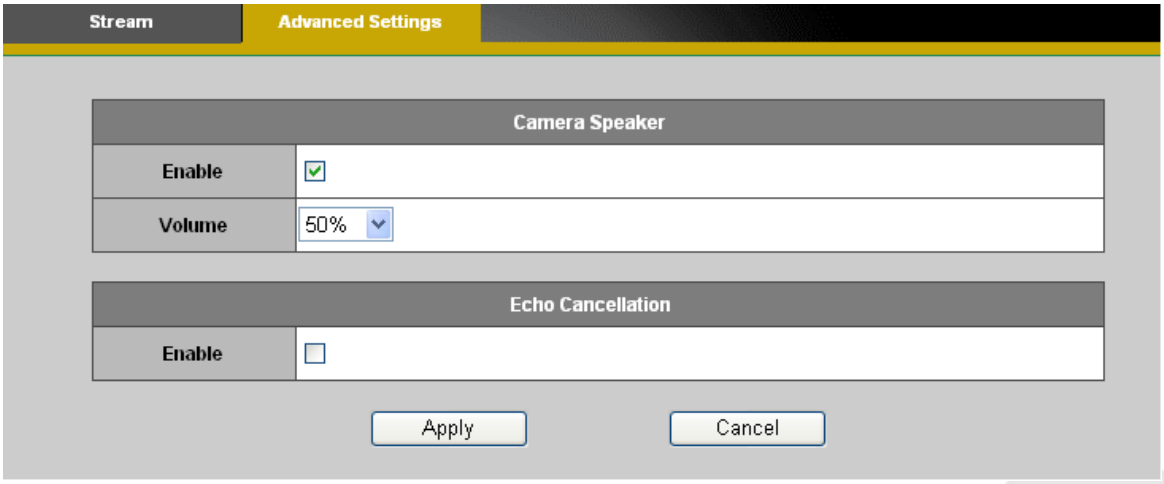
7.1.3 Audio

A. Stream



The administrator can set up two separate streams for the camera for different viewing devices. The administrator can enable or disable the audio function on either stream. If audio enable is selected, select the Audio codec from the drop-down menu.

B. Advanced Settings

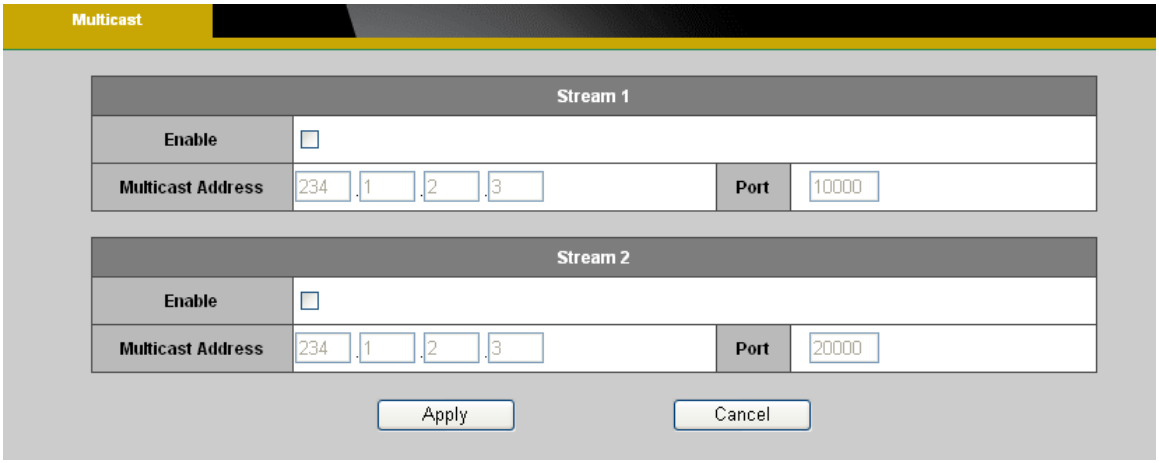


a. **Camera Speaker** – If the speaker is enabled, select the volume from the drop-down menu.

b. **Echo Cancellation Enabled** - Enable to avoid an echo.

Click **Apply** to apply settings or **Cancel** to cancel changes.

7.1.4 Multicast



Multicast sends a video stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address. Therefore, multicast can effectively save Internet bandwidth. The RTSP (Real-Time Streaming Protocol) controls the delivery of streaming media.

Click “Enable” to enable Multicast stream 1 or Multicast stream 2. The default value for multicast address and port are 234.1.2.3 and 10000. Use different port number for different streams. It is recommended to use the default values.

NOTE - Using the IP address of the Network Camera enables access to the video. Example: rtsp://192.168.1.1/channel1

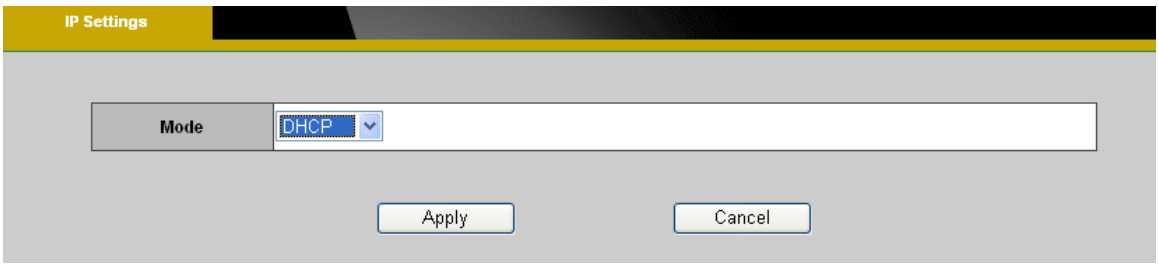
Click **Apply** to apply settings or **Cancel** to cancel changes.

7.2 Network

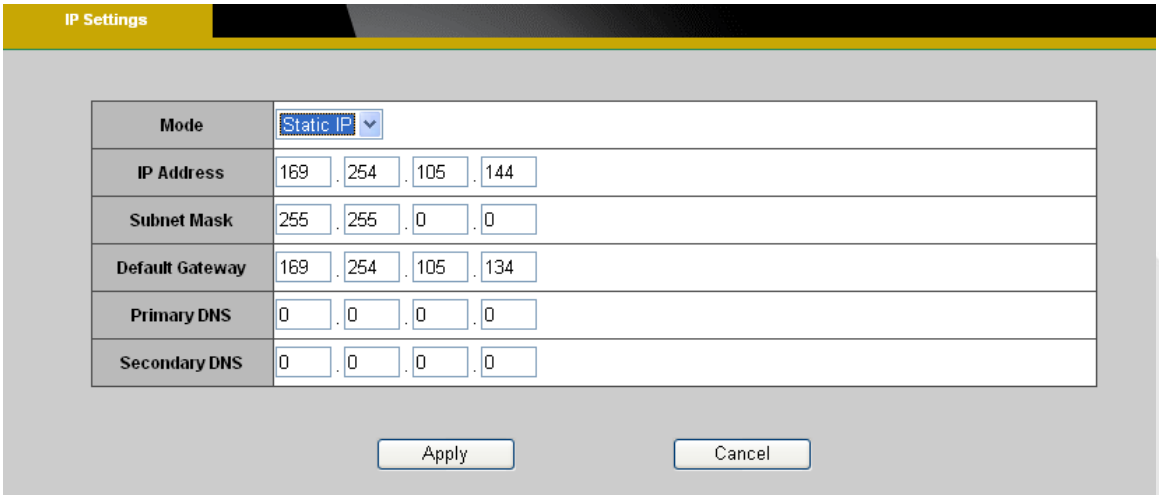
8.2.1 IP Settings

This section explains how to configure a wired network connection for the camera. There are several ways to setup the camera over the Internet: (1) obtain an available dynamic IP address assigned by a DHCP server, (2) use a static IP, or use PPPoE (Point-to-point over Ethernet). Select the desire setup mode from the IP settings drop-down menu.

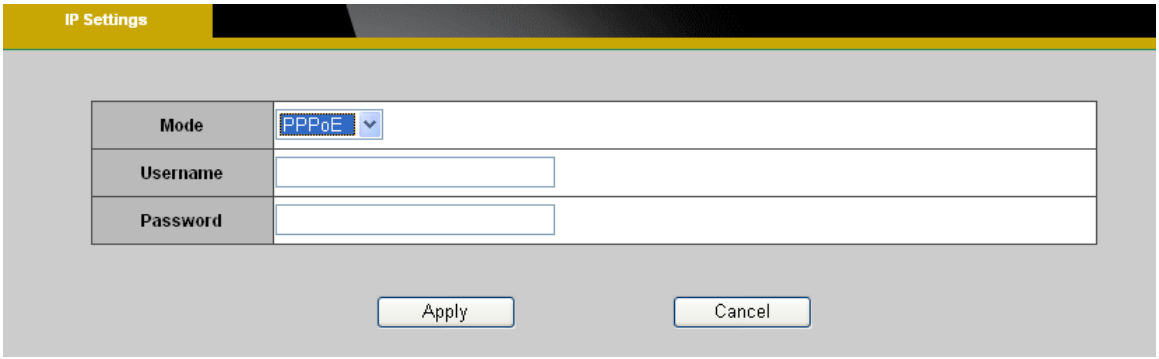
a. **DHCP** – If this option is selected, the camera will automatically obtain an available dynamic IP address from the DHCP server each time it connects to the LAN.



b. **Static IP** - Select this option to manually assign a static IP address to the camera. Enter the static IP address, Subnet mask, Default Gateway, Primary and Secondary DNS provided by the ISP.

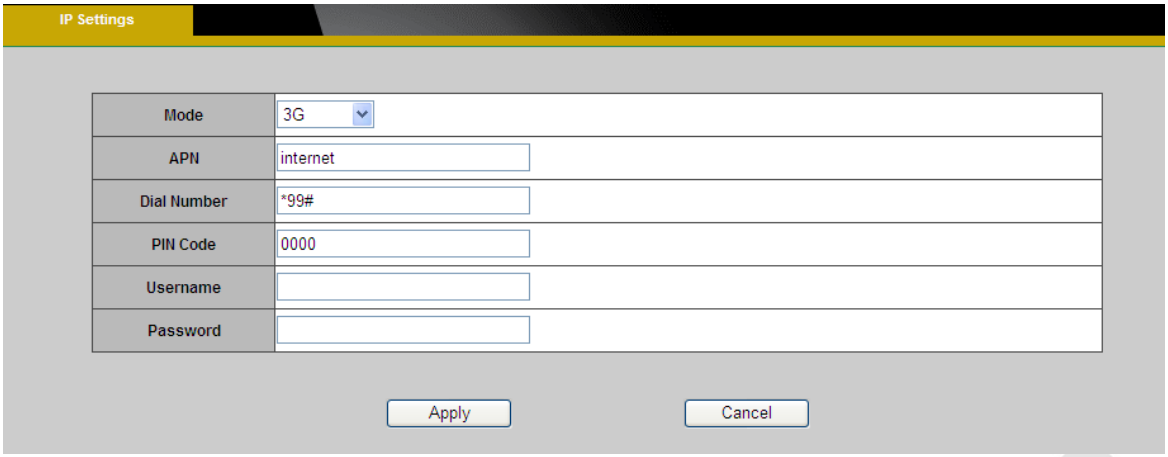


c. **PPPoE (Point-to-point over Ethernet)** - Use this mode if connecting to the Internet through a DSL Line.



NOTE - To utilize this feature, it requires an account provided by an Internet Service Provider. Enter the user name and password provided by the ISP.

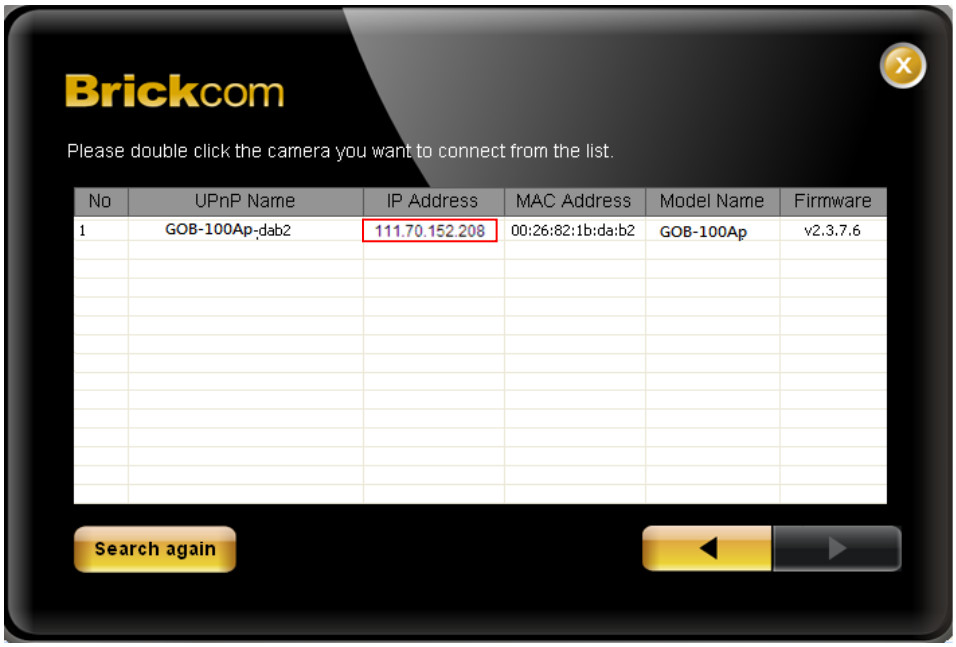
d. **3G(*)** – Use this option if using a 3G SIM card to transmit video/audio surveillance over a 3G network



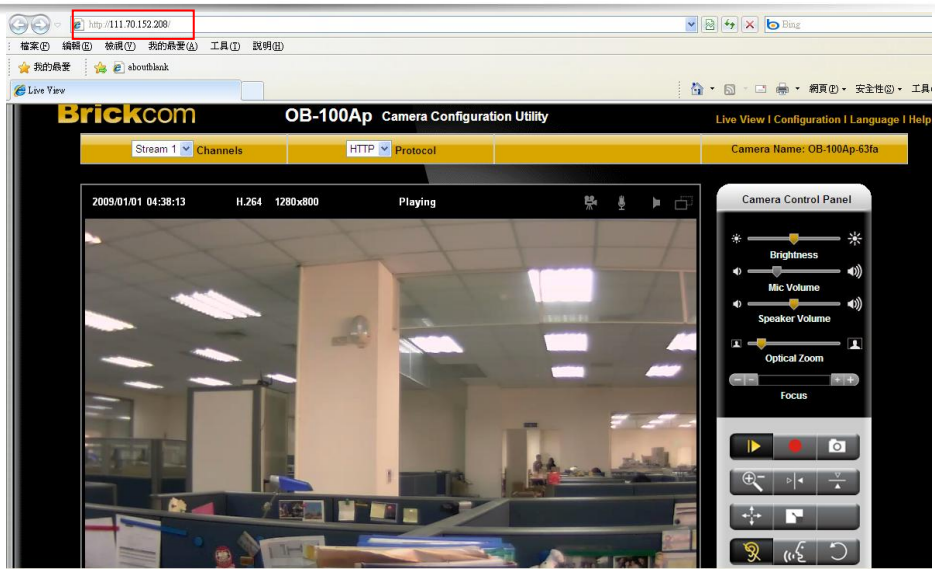
NOTE - This function is only available for GOB models.

1. Enter the APN (Access Point Number), Dial Number, PIN Code, User Name and Password provided by the ISP.
2. Click **Apply** to apply the settings. The message below will be displayed if the 3G settings were successfully applied.

3. Before disconnected the wired connection with the network camera, obtain the IP Address by opening EasyConfig. The 3G connection IP Address will be displayed in the IP Address column.

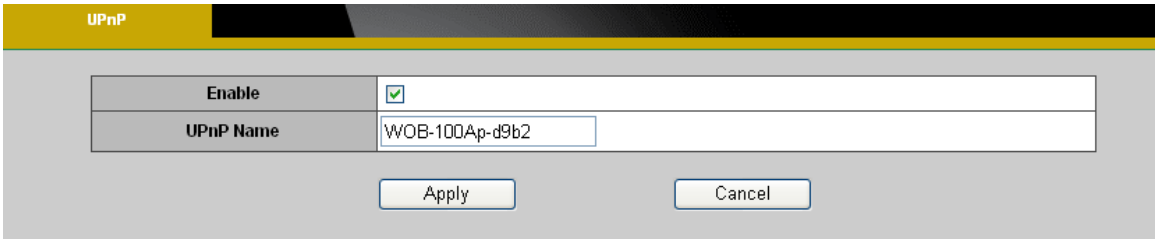


4. The network camera can now be accessed over a 3G network. To access the video feed through the internet, open a web browser and enter the network camera's IP address. A dialog window will pop up requesting a username and password. As stated on the previous page, the default username and password for the Administrator account are **"admin/admin"**.


http://111.70.152.208/
Live View
Brickcom
OB-100Ap Camera Configuration Utility
Live View I Configuration I Language I Help
Stream 1
Channels
HTTP
Protocol
Camera Name: OB-100Ap-63fa
2009/01/01 04:38:13
H.264 1280x800
Playing
Camera Control Panel
Brightness
Mic Volume
Speaker Volume
Optical Zoom
Focus

8.2.2 UPnP

Universal Plug and Play (UPnP) simplifies the process of adding a camera to a local area network. Once connected to a LAN, the camera will automatically appear on the intranet. Click “Enable” to enable this function and enter an UPnP name which the camera will appear under on the intranet.



Click **Apply** to apply settings or **Cancel** to cancel changes.

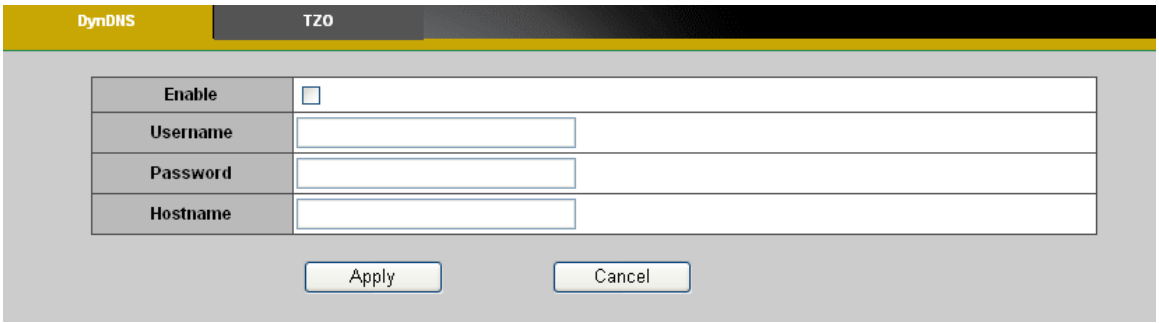
8.2.3 DDNS (dynamic domain name service)

DDNS links a domain name to an IP address, allowing users to easily access their camera even with a changing IP address. Brickcom network cameras are compatible with two DDNS service providers (1) DynDNS, and (2) TZO.

NOTE - Before utilizing this function; please apply for a dynamic domain account from a DDNS provider.

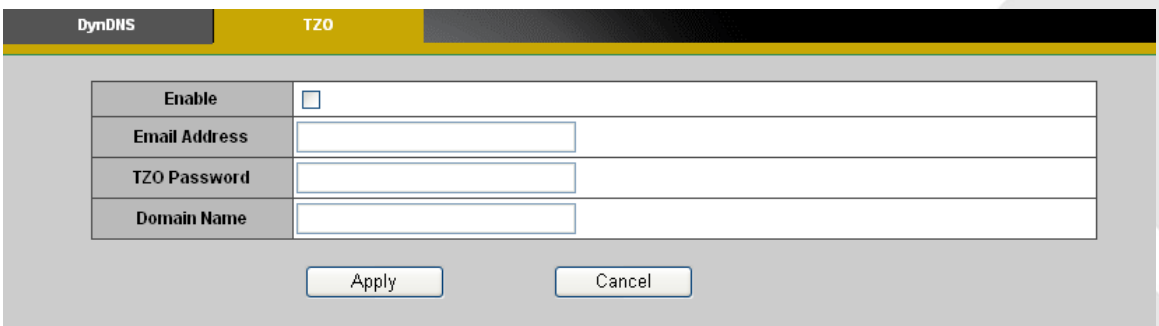
a. **DynDNS** – Enable the DynDNS to allow the camera to have a fixed host and domain name. Refer to the DynDNS website (www.dyndns.com) to apply for a dynamic domain account. When an account has been created, enter the username, password and hostname.

   Click **Apply** to apply settings or **Cancel** to cancel changes.



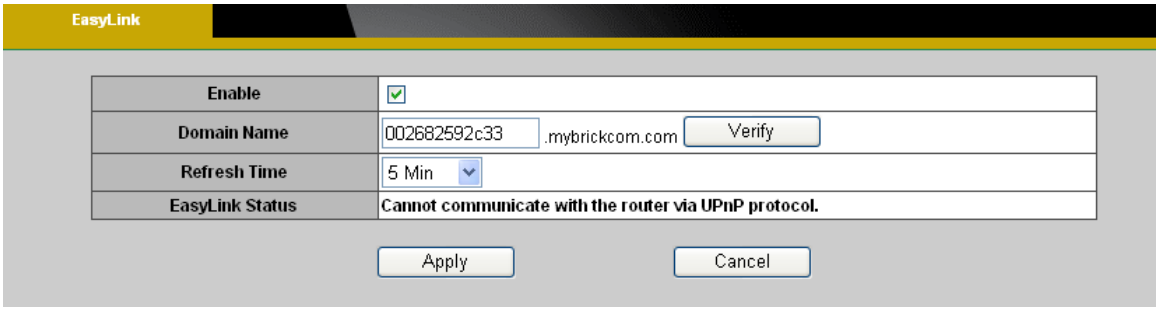
b. **TZO** - TZO is a DDNS provider which allows users to create a dynamic DNS. Refer to the TZO website (http://www.tzo.com/) to apply for a dynamic domain account. When an account has been created, enter the e-mail address, password and domain name.

   Click **Apply** to apply settings or **Cancel** to cancel changes.



8.2.4 EasyLink™

EasyLink™ is a unique Brickcom function which allows users to assign a unique domain name to their network camera's IP address. There is no need to configure the router to open up ports or remember hard-to-memorize IP addresses. When this function is enabled, users can log onto [uniquedomainname].mybrickcom.com to view the camera's web GUI and live view.



a. Check the box to enable EasyLink™.

b. Enter a unique domain name whose length must be between 5-32 characters. Verify that the domain name is available.

c. Select a desired amount of time from the Refresh Time drop-down menu to confirm the connection status.

Click **Apply** to apply settings or **Cancel** to cancel changes.

NOTE - The EasyLink function will not work if the following conditions occur:

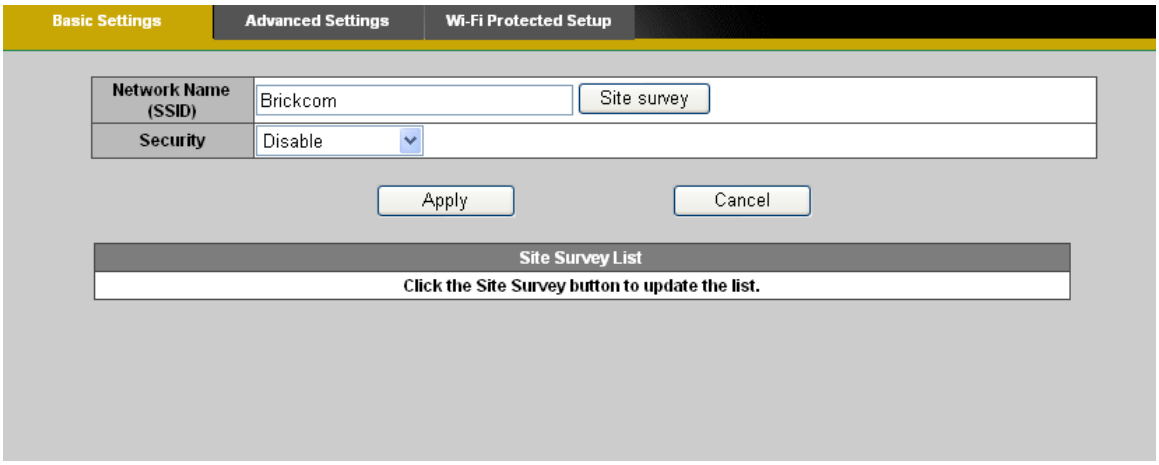
1. The camera cannot be located behind a double NAT network.
2. The camera's IP address cannot be assigned to specific port numbers using the router's port forwarding.
3. EasyLink uses UPnP to exchange port information with the router. The camera must connect to the internet through a router which supports UPnP.

8.2.5 Wireless

These settings control how a Network Camera interacts with a wireless network. Users can identify the wireless network and enable wireless encryption.

NOTE – This function is only available for WFB models.

A. Basic Settings

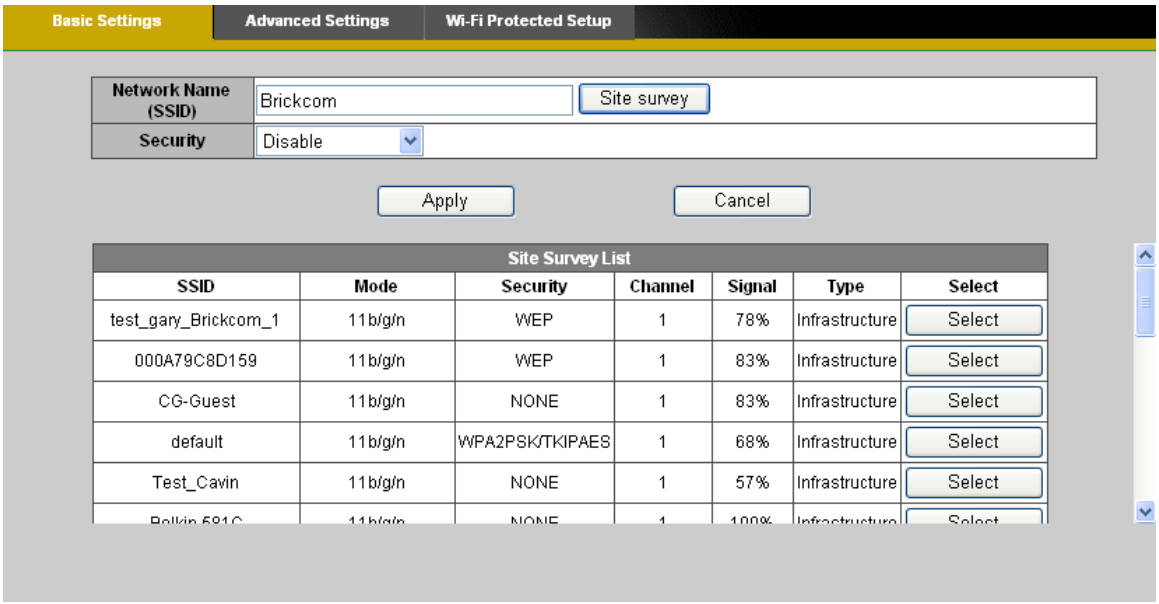


a. **Network Name (SSID)** - The Service Set Identifier (SSID) is the network name used to identify the wireless signal emitted from a wireless camera. It is case-sensitive and can be up to 32 characters long.

Wireless devices have a default SSID set by the factory. Brickcom wireless products use Brickcom as the default name. It is recommended for users to rename their SSID to something unique in order to distinguish their wireless device from surrounding wireless networks.

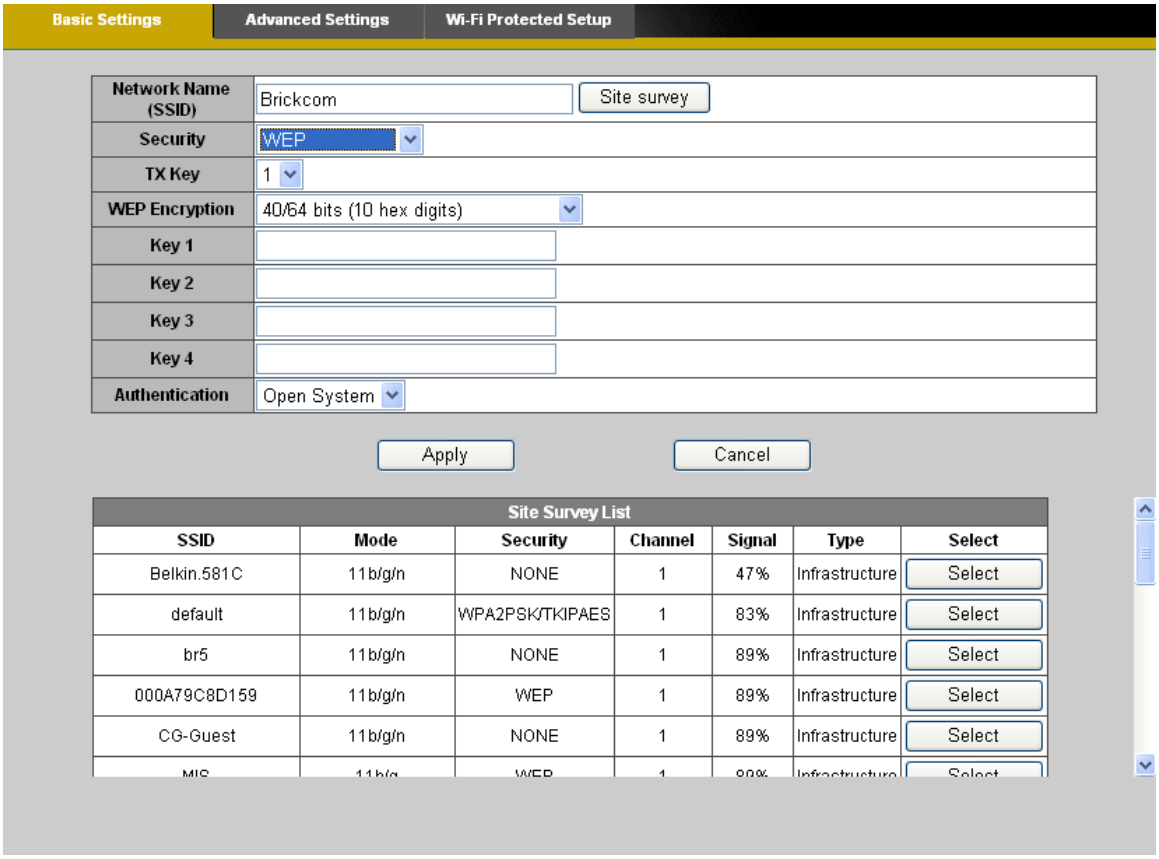
NOTE - Be careful when including personal information when naming the SSID as it is viewable by anyone browsing for wireless networks.

b. **Site Survey** – Survey the local area for available wireless networks. The user should select their Local Area Network (LAN) from the Site Survey List.



c. **Security** - Encryption protects data transmitted over a wireless network. Wi-Fi Protected Access (WPA-Personal/WPA2-personal) and Wired Equivalent Privacy (WEP) offer different levels of security for wireless communication. A network encrypted with WPA-Personal/WPA2-personal is more secure than a network encrypted with WEP because WPA-Personal/WPA2-personal uses dynamic key encryption. To protect the information as it passes through the airwaves, it is recommended to enable the highest level of encryption supported by the network equipment.

i. **WEP**- Wired Equivalent Privacy (WEP)



Wired Equivalent Privacy (WEP) is a basic encryption method which transmits network broadcast messages using radio signals. It is not as secure as WPA.

1) **Tx Key** - Select a key from the drop-down menu.

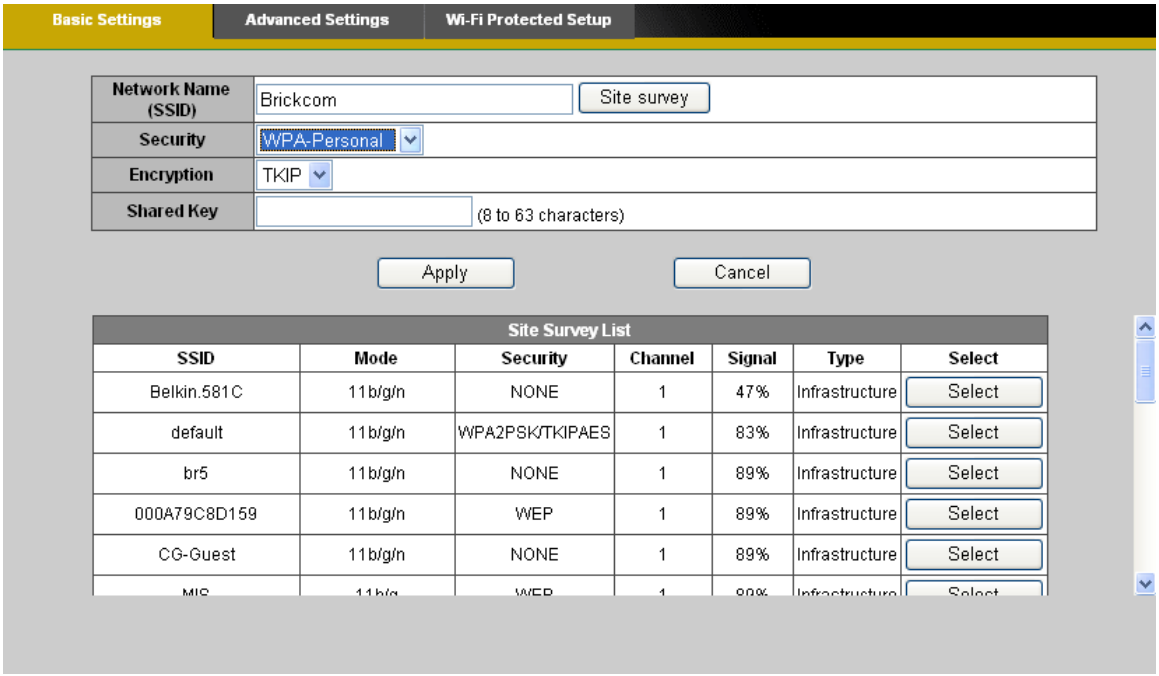
2) **WEP Encryption** - Select a level of WEP encryption: 64 bits 10 hex digits or 128 bits 26 hex digits. The default is 64 bits 10 hex digits.

3) **Key 1-4** - Enter the WEP key(s) manually.

4) **Authentication** - The default is set to Open System, which allows either Shared Key or Auto authentication to be used. With Shared Key authentication, the sender and recipient use a WEP key for authentication. With Auto authentication, the sender and the recipient do not use a WEP key for authentication.

Click **Apply** to apply settings or **Cancel** to cancel changes.

ii. **WPA-Personal** - WiFi Protected Access (WPA)-Personal

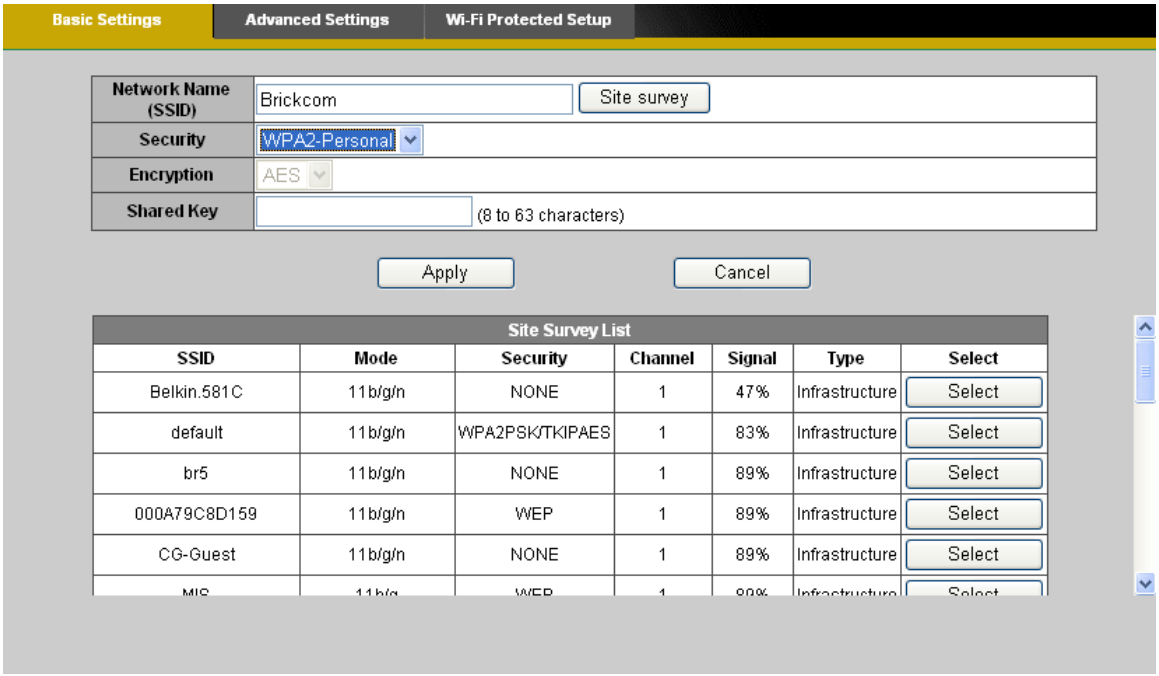


1) **Encryption** - Supports two encryption methods with dynamic encryption keys: Temporal Key Integrity Protocol (TKIP) and Advanced Encryption Standard (AES). Select the algorithm type from the drop down menu: TKIP or AES. The default is TKIP.

2) **Shared Key** - Enter the key shared between the Router and the server keys. Enter a password of 8-63 characters.

Click **Apply** to apply settings or **Cancel** to cancel changes.

iii. **WPA2-Personal** - WiFi Protected Access (WPA2-Personal)

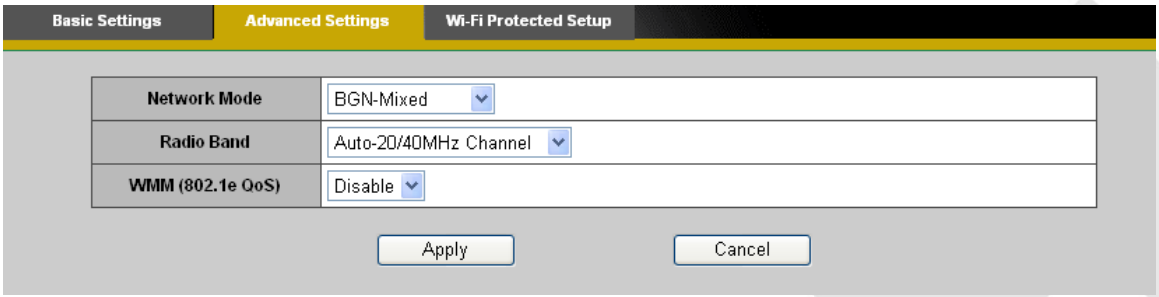


1) **Encryption** - WPA2 supports AES encryption method with dynamic encryption keys.

2) **Shared Key** - Enter the key shared between the Router and the server keys. Enter a password of 8-63 characters.

NOTE - If using WPA or WPA2, each device in the wireless network must use the same WPA or WPA2 method and shared key or else the network will not function properly.

B. Advanced Settings



a. **Network Mode** - From the drop-down menu, select the wireless standards running on the network.

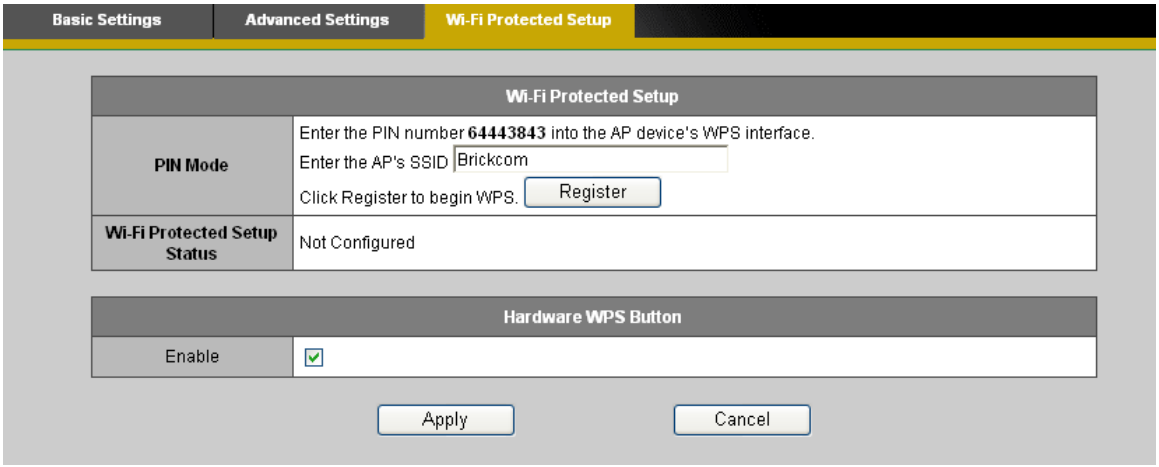
- If there are Wireless-B, Wireless-G and Wireless-N (2.4GHz) devices on the network, use the default setting, BGN-Mixed.
- If there are Wireless-B and Wireless-G devices on the network, select BG-Mixed.
- If there are only Wireless-B devices on the network, select Wireless-B Only.
- If there are only Wireless-G devices on the network, select Wireless-G Only.
- If there are only Wireless-N (2.4GHz) devices on the network, select Wireless-N Only.
- (*) If there are Wireless-A and Wireless-N devices on the network, select AN-Mixed.
- (*) If there are Wireless-A, Wireless-B, Wireless-G and Wireless-N (2.4GHz) devices on the network, use the default setting, ABGN-Mixed.
- (*) If there are only Wireless-A devices on the network, select Wireless-A Only.

b. **Radio Band** - The settings are available for the Auto-20/40MHz channel and Standard-20 MHz channel.

c. **Enable WMM (802.1e QoS)** - WMM is a wireless Quality of Service feature that improves quality for audio, video, and voice applications by prioritizing wireless traffic. To use this feature, the wireless client devices on the network must support Wireless WMM. The default setting is Enabled. To disable this feature, select Disable.

Click **Apply** to apply settings or **Cancel** to cancel changes.

C. *Wi-Fi Protected Setup*



Use this method if the client device has a Wi-Fi Protected Setup PIN number.

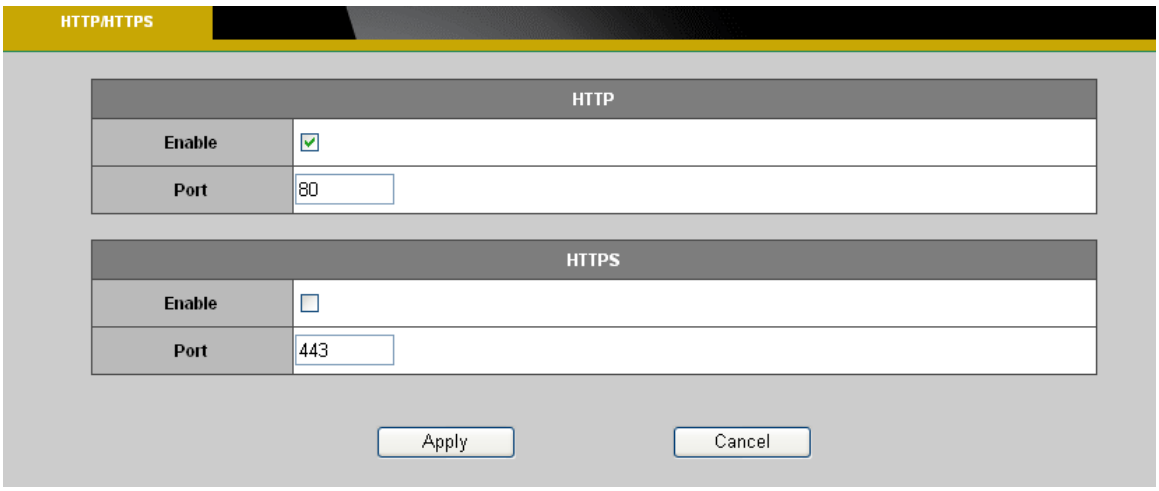
a. Enter the network name from the device in the field.

b. Click <Register> to start WPS.

c. Click “Enable” to enable the WPS Button. If this feature is not enabled, the user will not be able to use the WPS button

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.2.6 HTTP/HTTPS



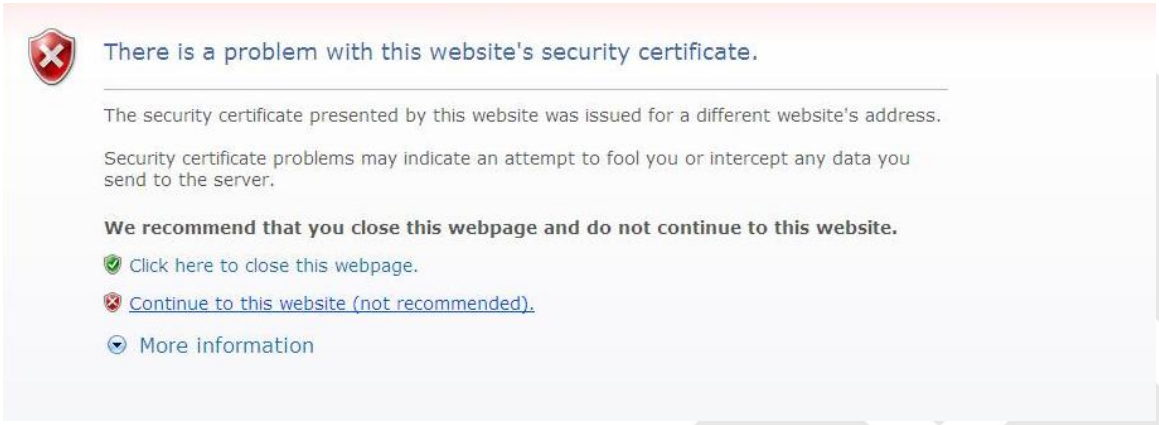
a. **HTTP** – (HyperText Transfer Protocol) - This protocol allows for TCP protocol quality without having to open specific ports for streaming. Users inside a firewall can utilize this protocol to allow streaming data through.

b. **HTTPS** - (Hypertext Transfer Protocol over SSL) - This protocol allows authentication and encrypted communication over SSL (Secure Socket Layer). It helps protect streaming data transmission over the Internet on a higher security level than HTTP.

Click “Enable” to enable and **Apply** to apply settings or **Cancel** to cancel changes.

To enable HTTPS, users have to create and install a certificate.

i. Click “Continue to this website” to install.


There is a problem with this website's security certificate.
The security certificate presented by this website was issued for a different website's address.
Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.
We recommend that you close this webpage and do not continue to this website.
Click here to close this webpage.
Continue to this website (not recommended).
More information

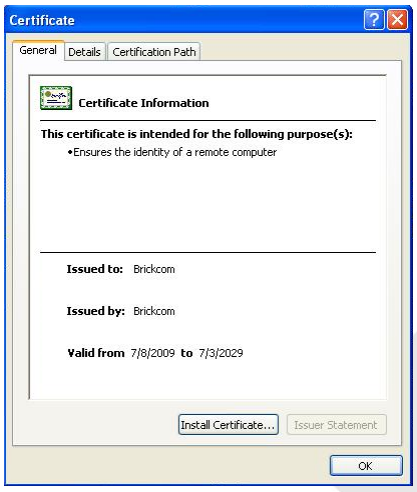
ii. Enter the User name and Password of the camera.

Connect to 192.168.1.1
The server 192.168.1.1 at Brickcom IPCAM Login requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name:
admin
Password:
Remember my password
OK
Cancel

iii. Click “Certificate Error” on the top right corner of the window to view the certificate.

https://192.168.1.103/
Certificate Error
File Edit View Favorites Tools Help
Live View
Brickcom
WCB-100Ap Camera Configur
Stream 1 Channels
TCP Protocol
2009/01/01 00:06:44 H.264 1280x800 Playing
Mismatched Address
The security certificate presented by this website was issued for a different website's address.
This problem may indicate an attempt to fool you or intercept any data you send to the server.
We recommend that you close this webpage.
About certificate errors
View certificates

iv. Click “Install Certificate” and follow the steps to finish the installation.

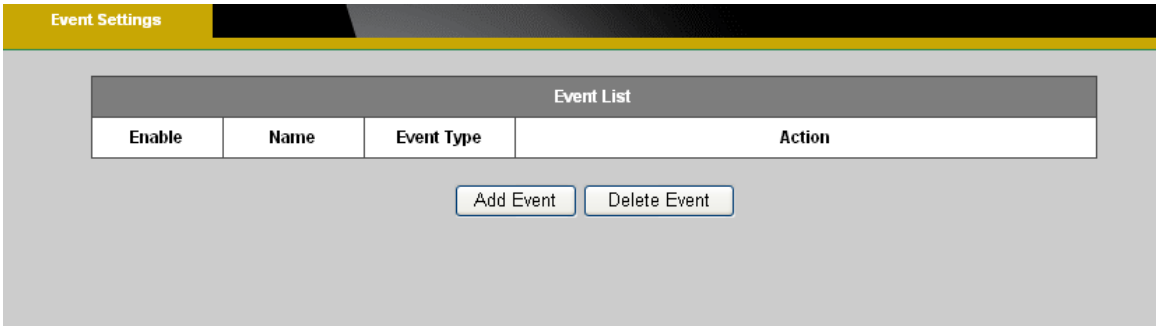


7.3 Event

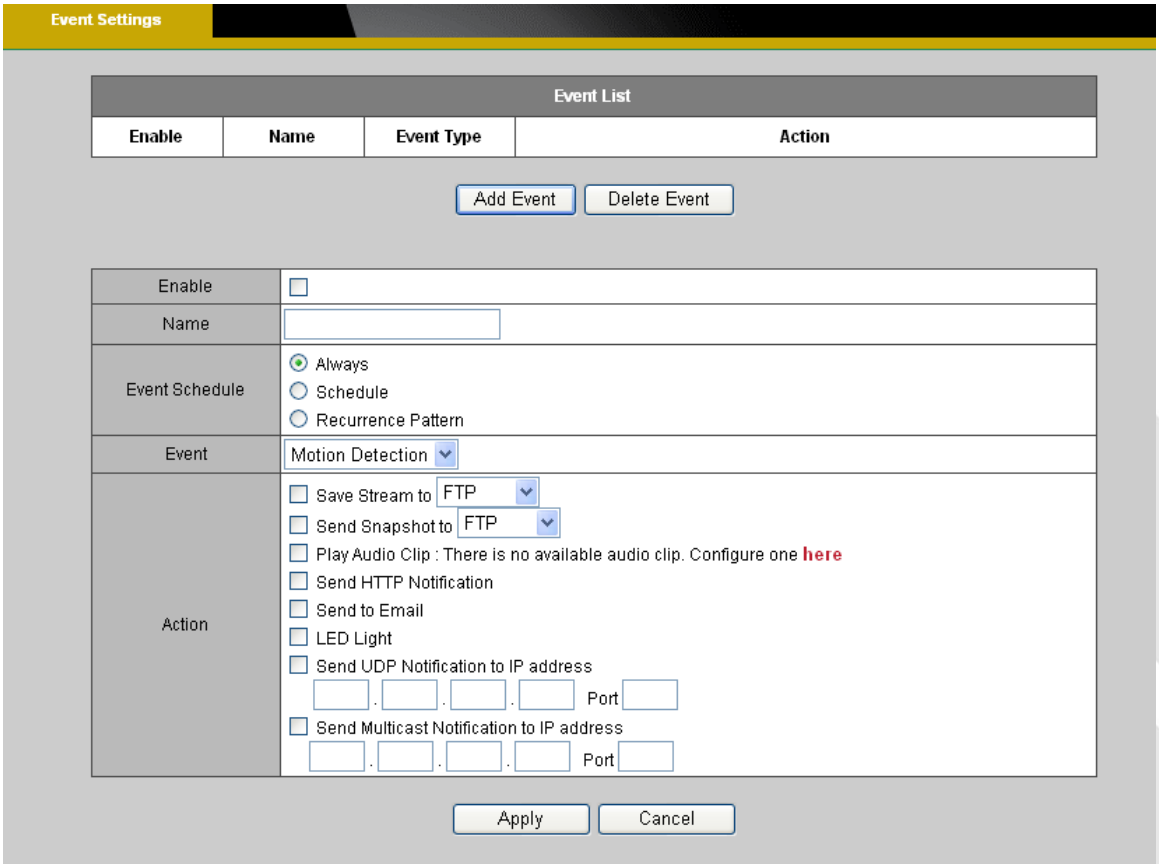
8.3.1 Event Settings

When an event (such as unauthorized movement) occurs, the camera can be scheduled to perform certain actions. An Event Type is a set of parameters that defines these actions.

This section describes how to configure the camera to perform certain actions when events occur.



Click <Add Event> on the Event Settings page. The Event Setup page will appear.



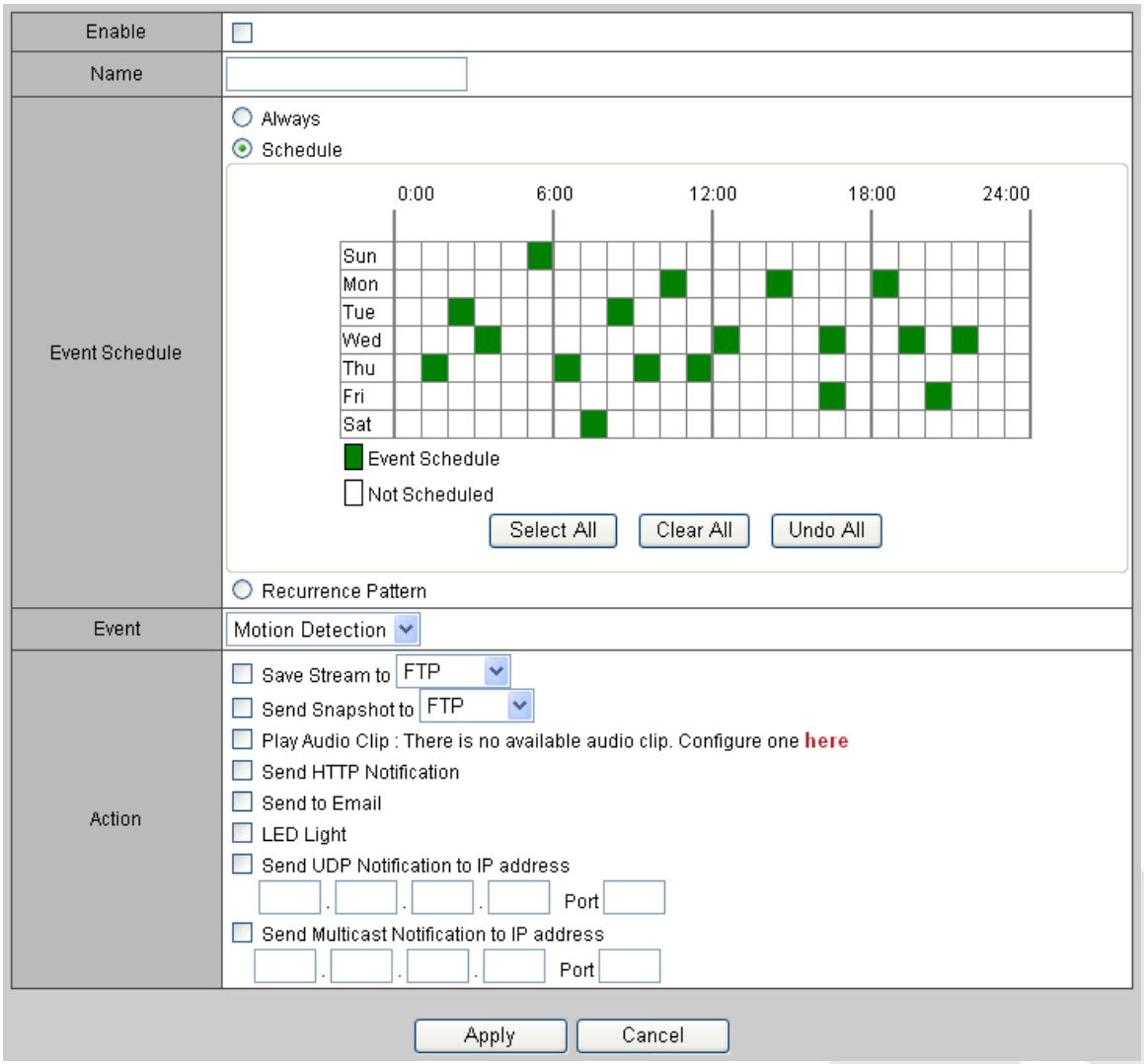
How to Set Up an Event Schedule

Event Schedule describes how and when the camera performs certain actions.

a. Check “Enable” and enter a descriptive name for the event schedule.

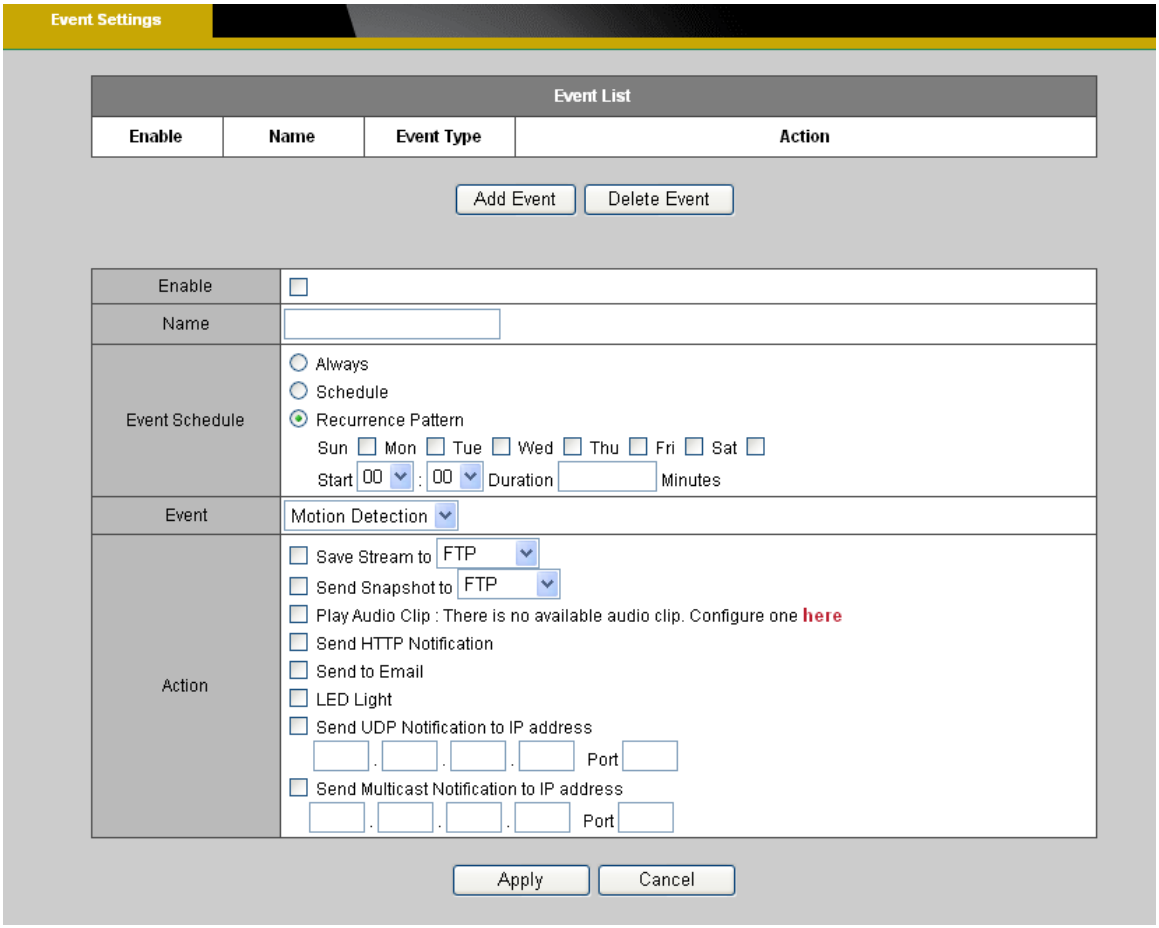
b. Set Event Schedule to define when the event is activated by selecting from Always (24 hours), Schedule or Recurrence pattern.

   i. If Schedule is selected from the Event Schedule, the following page will be displayed:



A Scheduled Event can be programmed for certain times and day. Click individual boxes to schedule specific times for the camera to detect events.

ii. If Recurrence Pattern is selected, the following page will be displayed.

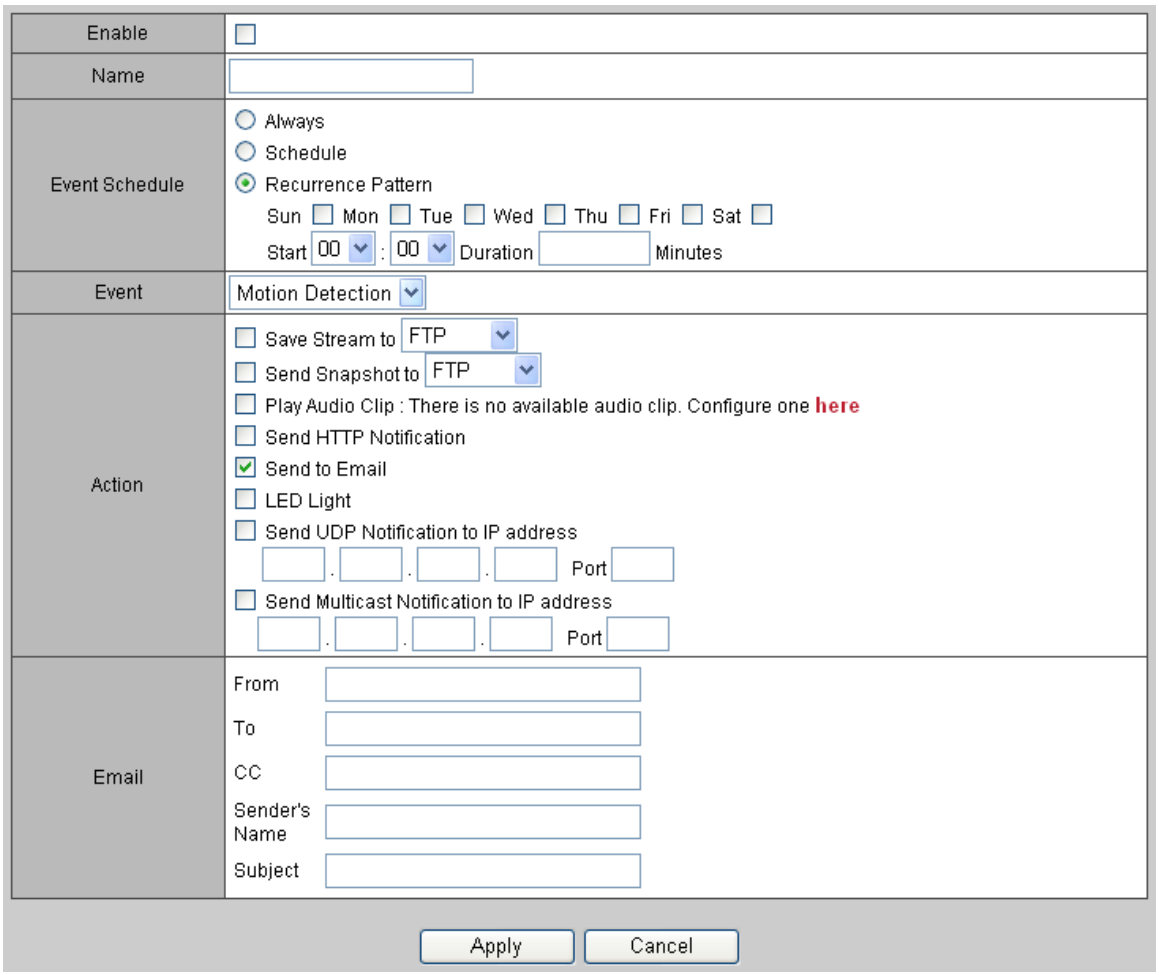


An event schedule can be programmed to recur at different times according to the user's needs. Select the days for the event schedule to occur. Select a start time and specify the duration.

c. Define what will trigger an event to occur by selecting an option from the Event drop-down list.

d. Select the Actions that will occur when the event is triggered.

i. When <Send to Email> is selected, the following page will be shown:



1) From - Enter the email address of the sender.

2) To - Enter the email address of the recipient. To enter multiple recipients, separate each using a comma.

3) My Name - Enter the sender's name that will appear in the recipient's inbox.

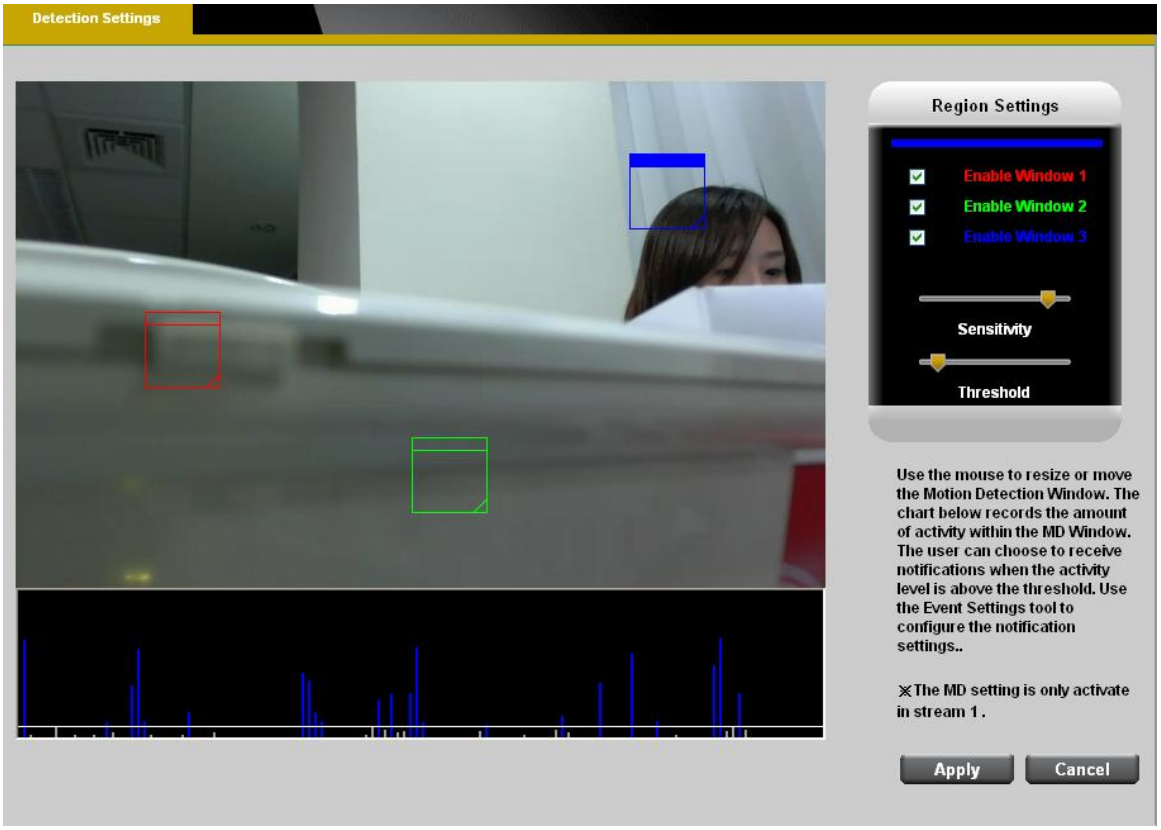
4) Subject - Enter the title of the email.

e. When complete, click Apply to save new event or Cancel to delete the event. The new event will appear on the event list.

f. To edit an event setting; select the event from the list. To remove an event setting from the list, select an event name from the list and then click <Delete Event>. Click <Add Event> to add more events.

8.3.2 Motion Detection

Motion can be detected by measuring changes in the speed or vector of an object or objects in the monitored area. This section explains how to configure the Network Camera to enable motion detection.


Detection Settings
Region Settings
Enable Window 1
Enable Window 2
Enable Window 3
Sensitivity
Threshold
Use the mouse to resize or move the Motion Detection Window. The chart below records the amount of activity within the MD Window. The user can choose to receive notifications when the activity level is above the threshold. Use the Event Settings tool to configure the notification settings..
※The MD setting is only activate in stream 1 .
Apply
Cancel

a. **Detection Setting** – Use this setting to enable and define the motion detection windows. The user can defined up to three areas on the live view window for motion detection.

   i. Select <Window1>, <Window2>, or <Window3> to adjust the motion detection window.

   ii. Check the box to enable the window.

   iii. Use the mouse to resize or move the motion detection window.

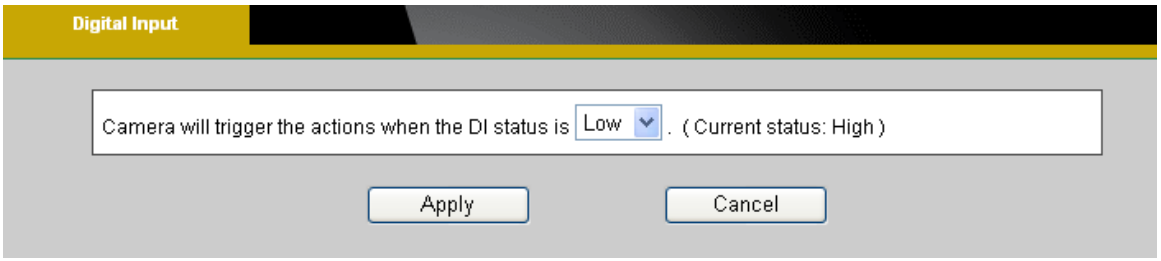
   iv. Adjust the “Sensitivity” level. Lower sensitivity levels will result in more activity needed to trigger an event.

   v. Adjust the “Threshold” to change the threshold level. The higher the threshold, the larger objects need to be to trigger an event.

vi. The chart below the Live View window indicates the activity level of the Motion Detection window. When motion is detected by the camera and exceeds the defined threshold, a red bar will appear. Users can use this feature as a trigger source to send photos or videos to a remote server via email or FTP.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.3.3 Digital Input (DI)



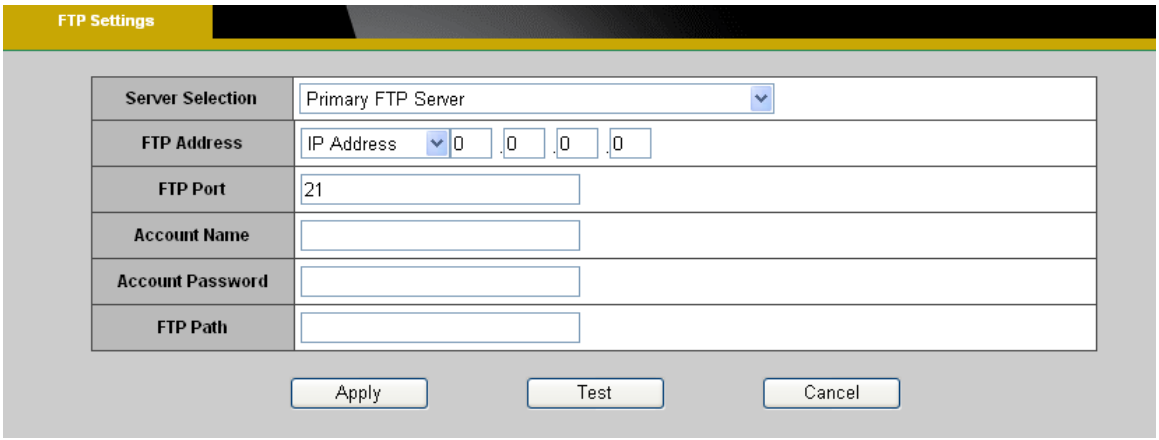
The DI socket allows the IP camera to receive input from an external device. The external device should have the ability to drive voltage on the connected DI wire to the triggering voltage level in order to notify the IP camera of any event of interest. The IP camera will then process the event notification according to the specific event rules.

a. **Triggering voltage Level**: LOW or HIGH. Users should select the option according to the capability of their external device.

7.4 Notifications

Use the tools in this section to specify what type of notification will be sent when an event occurs. The camera can send buffered images to an FTP server, Samba, Email, or HTTP.

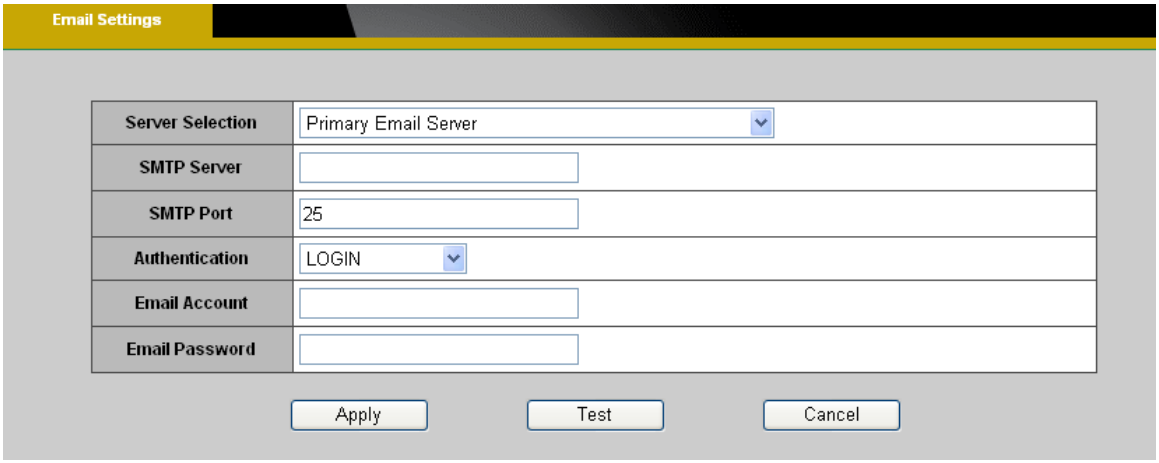
8.4.1 FTP Settings



File Transfer Protocol (FTP) is used as an application component to automatically transfer files for program internal functions. Select “Primary FTP Server” from the Server Selection drop down menu to send media files to a FTP server when an event is triggered. Enter the FTP IP address or hostname. By default, the FTP port server is set to 21. Enter the account name, password and FTP Path to configure the settings.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.4.2 E-mail Settings



Select “Primary Email Server” option from the Server Selection drop down menu to send media files to an email server when an event is triggered.

a. **SMTP Server** - Enter the server host name of the email server.

b. **SMTP Port** - Enter the port number of the email server; by default, the SMTP port is set to 25.

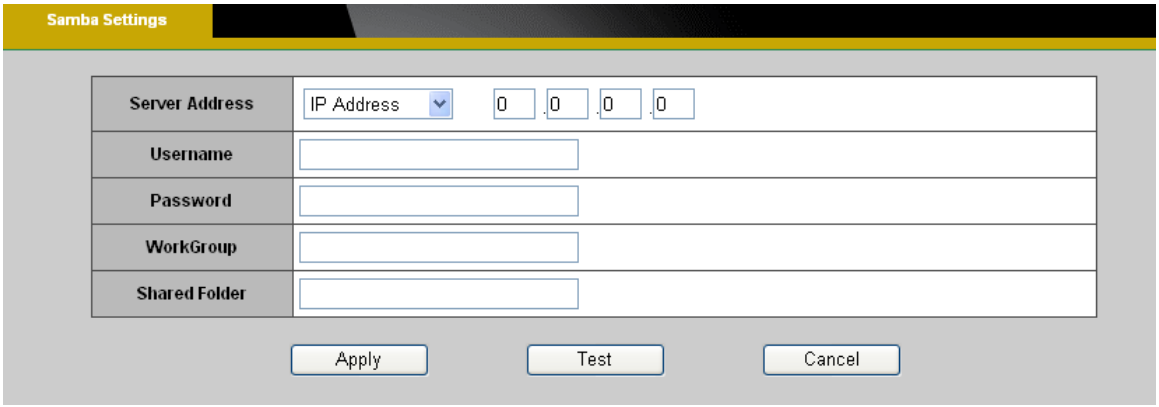
c. **Authentication** - Select the authentication type from the drop-down menu.

d. **Email Account** - Enter the user name of the email account if necessary.

e. **Email Password** - Enter the password of the email account if necessary.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.4.3 Samba Settings



Select this option to send the media files via a network neighborhood when an event is triggered.

a. **Server Address** - Enter the IP address of the Samba server.

b. **User Name** - Enter the user name of the Samba server.

c. **Password** - Enter the password of the Samba server.

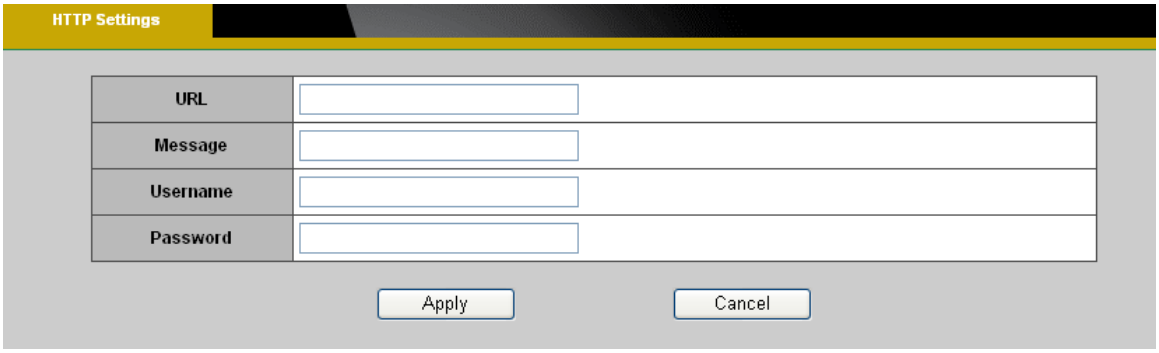
d. **Workgroup** - Enter the workgroup of the Samba server.

e. **Shared Folder** - Enter the share folder of the Samba server.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.4.4 HTTP Settings

Select this option to send the media files via an HTTP notification when an event is triggered.



a. **URL** – Specify the URL to send HTTP requests. The URL is normally written as: http://ip_address/notification.cgi?parameter

   ip_address – type the IP address or host name of the HTTP host.

   Parameter – type the notification parameter if necessary.

   Example

   URL - http://192.168.1.1/xxxx.cgi

   Message - name1=value1&name2=vlaue2

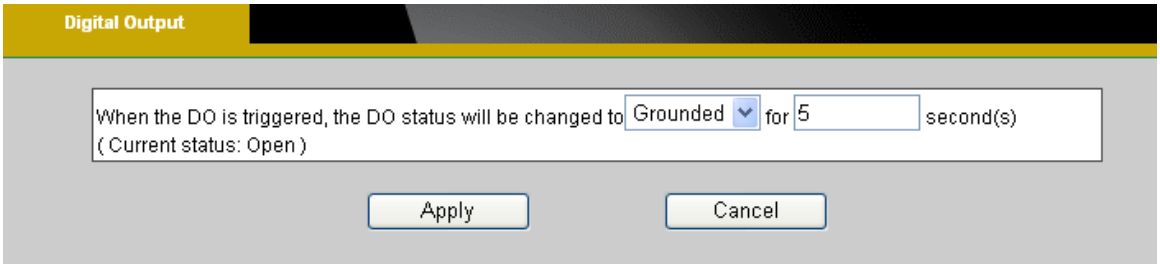
   Result - http://192.168.1.1/xxxx.cgi? name1=value1&name2=vlaue2 (ex: https://192.168.1.1/notification.cgi?event=MD&camera=FB-100A)

b. **Message** - Enter the message notification that will be sent when an event is triggered.

c. Enter the user name and password if necessary.

Click **Apply** to apply settings or **Cancel** to cancel changes.

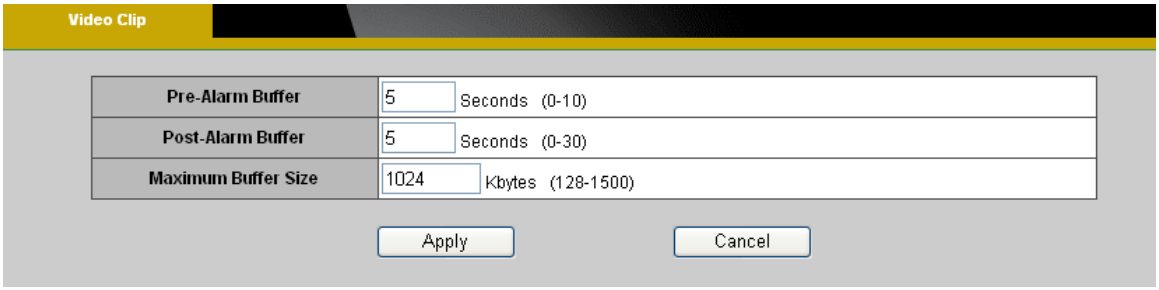
8.4.5 Digital Output (DO)


Digital Output
When the DO is triggered, the DO status will be changed to Grounded for 5 second(s)
(Current status: Open)
Apply
Cancel

The DO socket allows the IP camera to send output to an external device. While executing the DO notification action, the IP camera drives voltage on the connected DO wire to the triggering voltage level for X number of seconds. The connected external device will then be triggered for X number of seconds.

a. **Triggered Voltage Level**: OPEN or GROUND. Users should select the option according to the specification of their external device.

8.4.6 Video Clip



This function is used to determine when video clips will be recorded and stored after an event is triggered.

a. **Pre-alarm buffer** - Images can be stored internally on the server from the time immediately preceding the trigger. Enter the desired length of time.

b. **Post-alarm buffer** - Images can be stored internally on the server from the time immediately following the trigger. Enter the desired length of time.

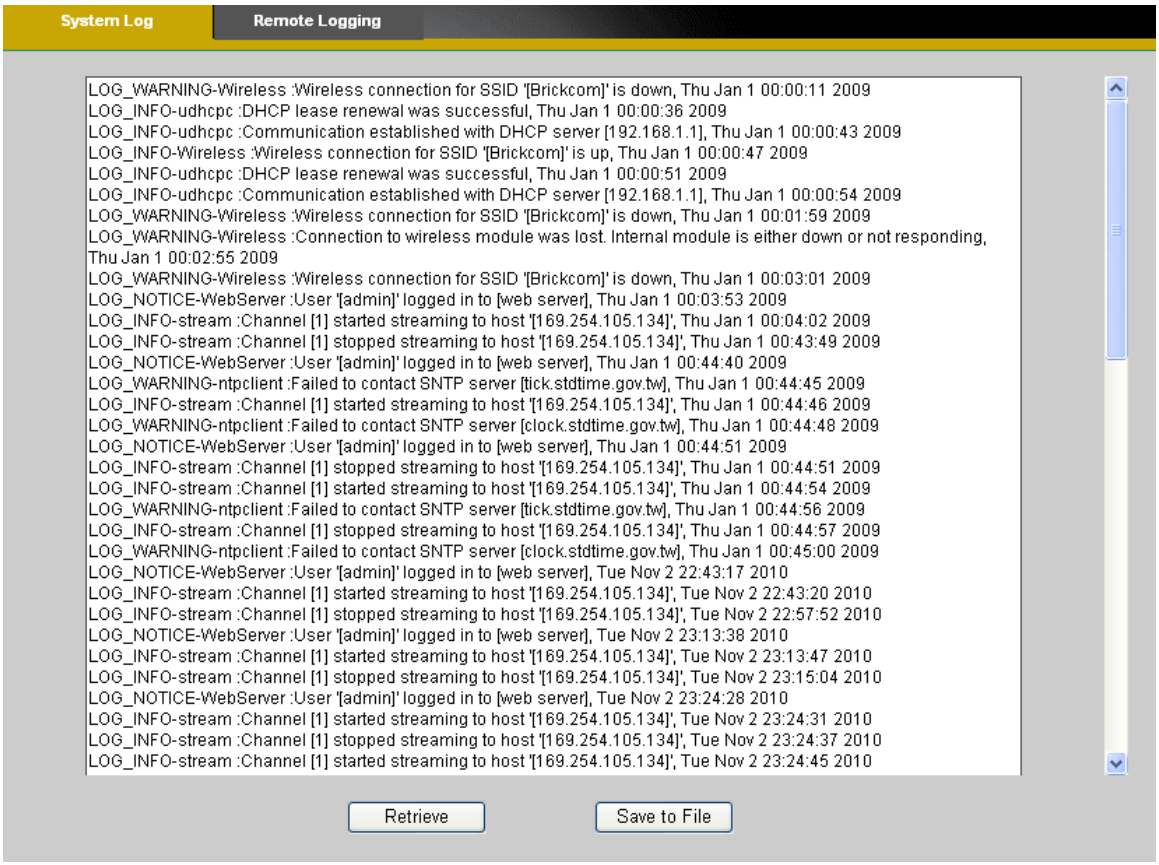
c. **Maximum buffer size** – Specify the maximum file size allowed.

Click **Apply** to apply settings or **Cancel** to cancel changes.

7.5 System

8.5.1 System Log

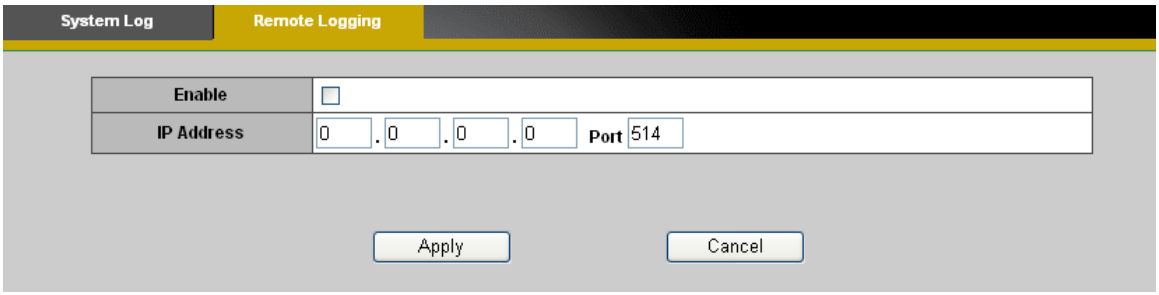
a. **System Log** – Set up the camera to record a system log when an event is triggered.


System Log
Remote Logging
LOG_WARNING-Wireless :Wireless connection for SSID '[Brickcom]' is down, Thu Jan 1 00:00:11 2009
LOG_INFO-udhcpc :DHCP lease renewal was successful, Thu Jan 1 00:00:36 2009
LOG_INFO-udhcpc :Communication established with DHCP server [192.168.1.1], Thu Jan 1 00:00:43 2009
LOG_INFO-Wireless :Wireless connection for SSID '[Brickcom]' is up, Thu Jan 1 00:00:47 2009
LOG_INFO-udhcpc :DHCP lease renewal was successful, Thu Jan 1 00:00:51 2009
LOG_INFO-udhcpc :Communication established with DHCP server [192.168.1.1], Thu Jan 1 00:00:54 2009
LOG_WARNING-Wireless :Wireless connection for SSID '[Brickcom]' is down, Thu Jan 1 00:01:59 2009
LOG_WARNING-Wireless :Connection to wireless module was lost. Internal module is either down or not responding, Thu Jan 1 00:02:55 2009
LOG_WARNING-Wireless :Wireless connection for SSID '[Brickcom]' is down, Thu Jan 1 00:03:01 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Thu Jan 1 00:03:53 2009
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.105.134]', Thu Jan 1 00:04:02 2009
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.105.134]', Thu Jan 1 00:43:49 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Thu Jan 1 00:44:40 2009
LOG_WARNING-ntpclient :Failed to contact SNTP server [tick.stdtime.gov.tw], Thu Jan 1 00:44:45 2009
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.105.134]', Thu Jan 1 00:44:46 2009
LOG_WARNING-ntpclient :Failed to contact SNTP server [clock.stdtime.gov.tw], Thu Jan 1 00:44:48 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Thu Jan 1 00:44:51 2009
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.105.134]', Thu Jan 1 00:44:51 2009
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.105.134]', Thu Jan 1 00:44:54 2009
LOG_WARNING-ntpclient :Failed to contact SNTP server [tick.stdtime.gov.tw], Thu Jan 1 00:44:56 2009
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.105.134]', Thu Jan 1 00:44:57 2009
LOG_WARNING-ntpclient :Failed to contact SNTP server [clock.stdtime.gov.tw], Thu Jan 1 00:45:00 2009
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Tue Nov 2 22:43:17 2010
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.105.134]', Tue Nov 2 22:43:20 2010
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.105.134]', Tue Nov 2 22:57:52 2010
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Tue Nov 2 23:13:38 2010
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.105.134]', Tue Nov 2 23:13:47 2010
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.105.134]', Tue Nov 2 23:15:04 2010
LOG_NOTICE-WebServer :User '[admin]' logged in to [web server], Tue Nov 2 23:24:28 2010
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.105.134]', Tue Nov 2 23:24:31 2010
LOG_INFO-stream :Channel [1] stopped streaming to host '[169.254.105.134]', Tue Nov 2 23:24:37 2010
LOG_INFO-stream :Channel [1] started streaming to host '[169.254.105.134]', Tue Nov 2 23:24:45 2010
Retrieve
Save to File

This page displays the system's log in chronological order. The system log is stored in the camera's buffer area and will be overwritten when the buffer area is full.

Click **Retrieve** to retrieve the log or click **Save to file** to save the system log.

b. **Remote Logging** - The user can configure the camera to send the system log file to a remote server as a log backup.



i. Click to enable remote log and enter the IP address of the remote server.

ii. Enter the port number of the remote server.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.5.2 Date and Time

a. **Manual** – Manually enter the date and time.

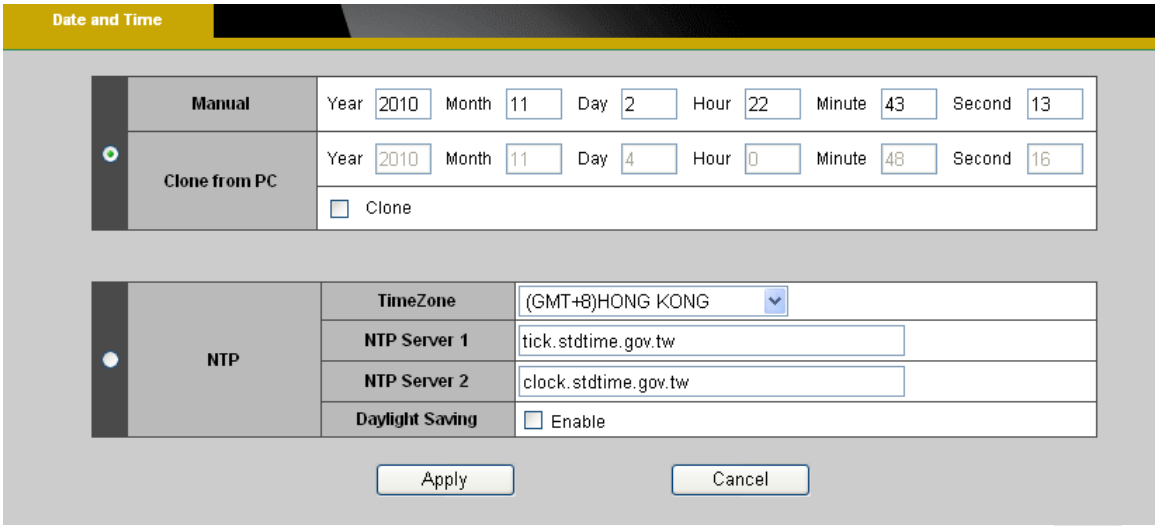
b. **Clone from PC** – The camera will sync with the time, date and time zone of the computer used to modify the camera settings. Check "Clone" to utilize this option. The read-only date and time of the PC will be displayed.

c. **NTP (Network Time Protocol)** - NTP is a protocol for synchronizing the clocks of a computer system. Select to update the time with a NTP server on an hourly, daily, weekly, or monthly basis.

   i. Time Zone – Select the local time zone from drop-down menu.

   ii. NTP Server 1 and Server 2 - Enter the address of the NTP server

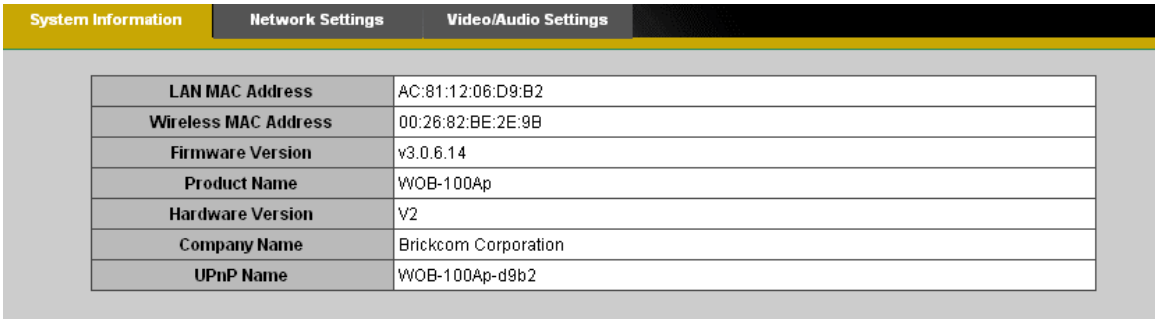
   iii. Daylight Saving - Enable this option to automatically update for Daylight Savings Time.



Click **Apply** to apply settings or **Cancel** to cancel changes.

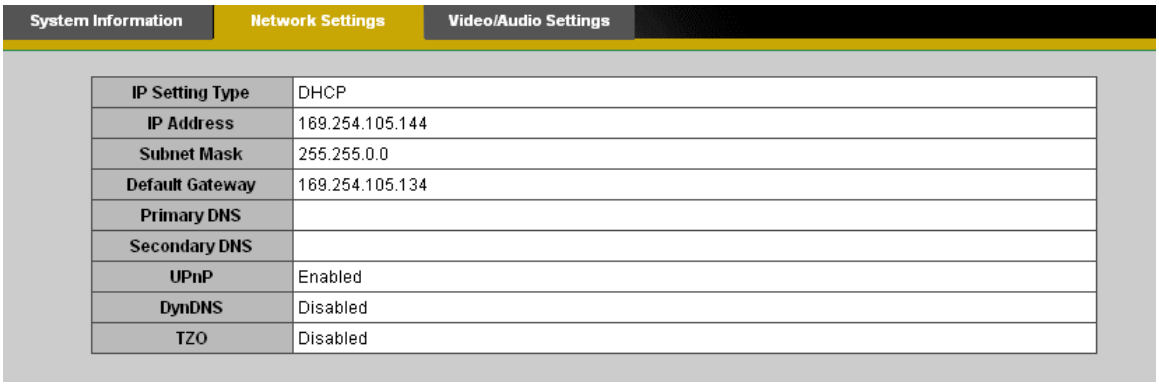
8.5.3 Device Information

a. **System Information** – Displays the complete system information of the camera.



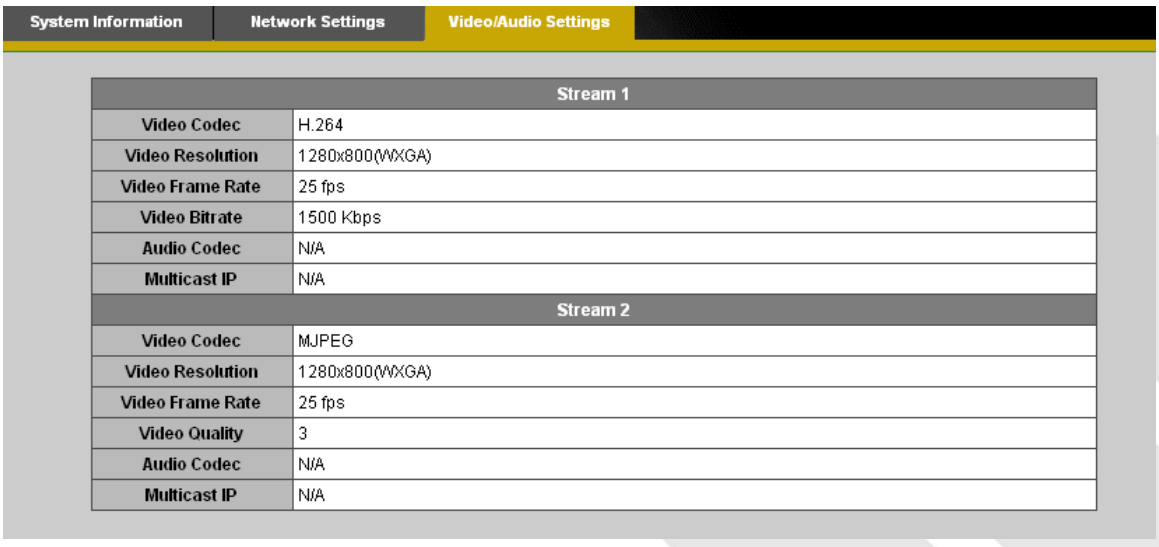
LAN MAC Address	AC:81:12:06:D9:B2
Wireless MAC Address	00:26:82:BE:2E:9B
Firmware Version	v3.0.6.14
Product Name	WOB-100Ap
Hardware Version	V2
Company Name	Brickcom Corporation
UPnP Name	WOB-100Ap-d9b2

b. **Network Settings** – Displays the complete network settings information of the camera.



IP Setting Type	DHCP
IP Address	169.254.105.144
Subnet Mask	255.255.0.0
Default Gateway	169.254.105.134
Primary DNS	
Secondary DNS	
UPnP	Enabled
DynDNS	Disabled
TZO	Disabled

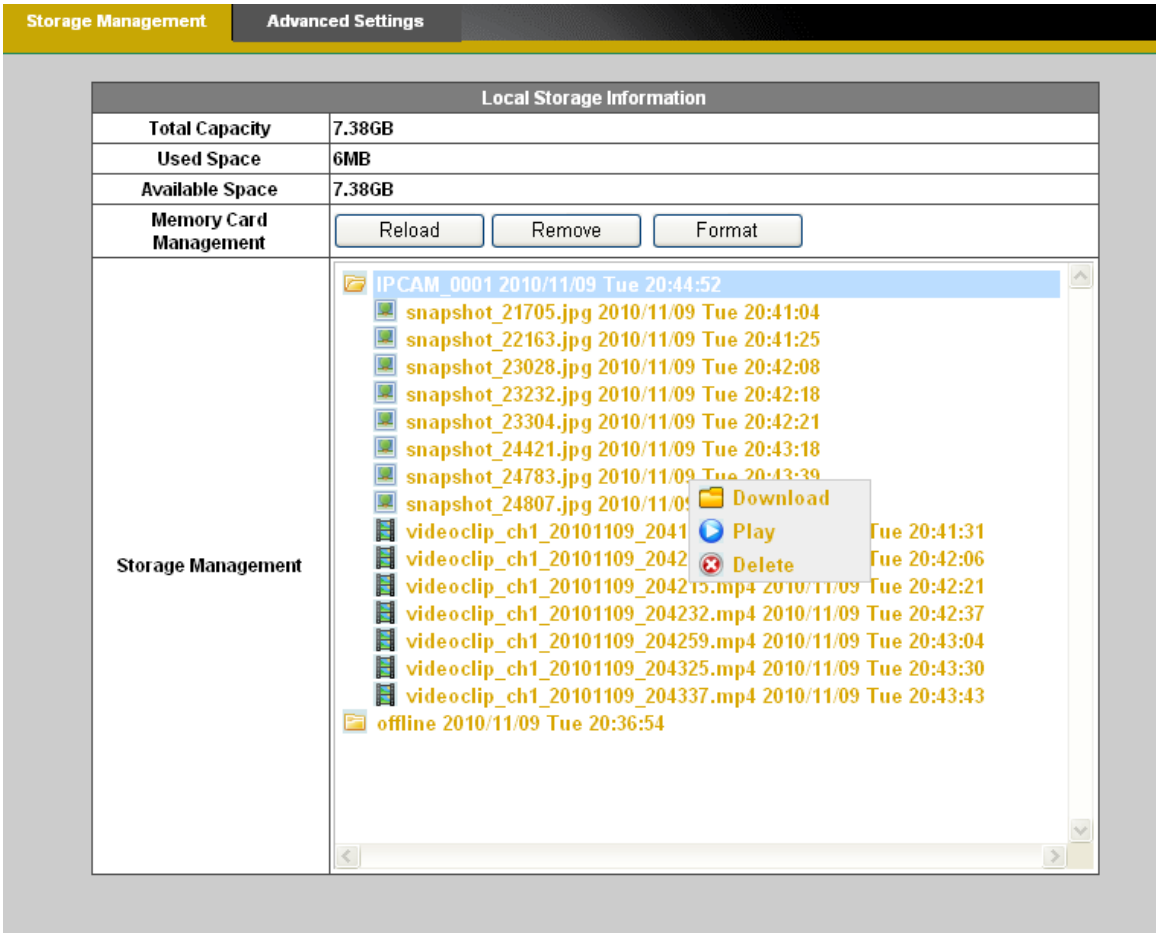
c. **Video/Audio Settings** – Displays the complete video/audio settings information of the camera.



Stream 1	
Video Codec	H.264
Video Resolution	1280x800(WXGA)
Video Frame Rate	25 fps
Video Bitrate	1500 Kbps
Audio Codec	N/A
Multicast IP	N/A
Stream 2	
Video Codec	MJPEG
Video Resolution	1280x800(WXGA)
Video Frame Rate	25 fps
Video Quality	3
Audio Codec	N/A
Multicast IP	N/A

8.5.4 Storage Management(*)

a. **Storage Management** - Storage Management is used to view all the recorded files on the Micro-SD/SDHC card.



i. Click **Reload** to refresh the list of recorded files.

ii. Click **Remove** to safely remove the Micro-SD/SDHC memory card.

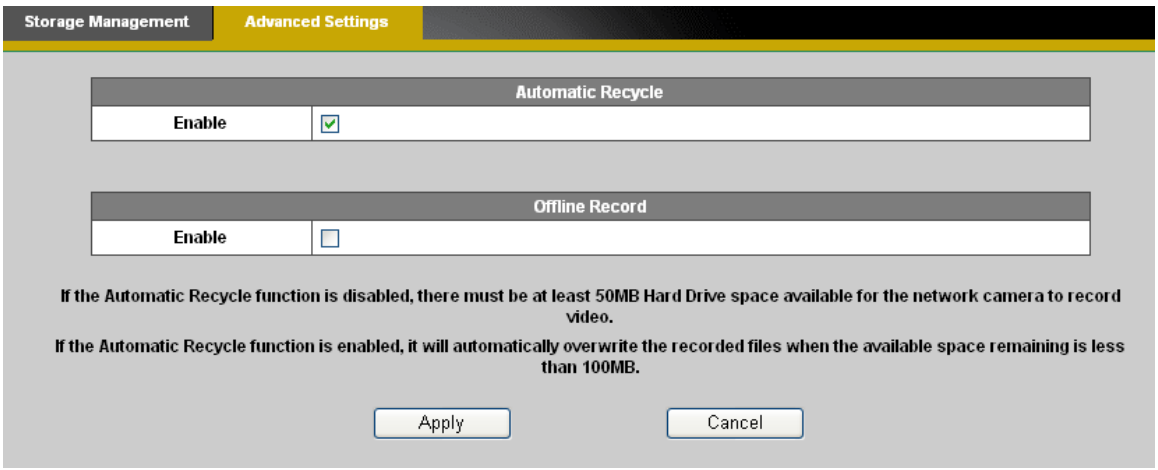
iii. Click **Format** to format the Micro-SD/SDHC memory card.

iv. Left click on the folder to list the recorded files. The user can either play the snapshot of the recorded files by moving the mouse pointer over the file or double click on a file to play it.

v. Right click on the folder to download, play or delete the recorded files.

NOTE – The user may need to install QuickTime multimedia framework to play the video clips.

b. **Advanced Settings**


Storage Management
Advanced Settings
Automatic Recycle
Enable
Offline Record
Enable
If the Automatic Recycle function is disabled, there must be at least 50MB Hard Drive space available for the network camera to record video.
If the Automatic Recycle function is enabled, it will automatically overwrite the recorded files when the available space remaining is less than 100MB.
Apply
Cancel

i. **Automatic Recycle**(*) – Enable to automatically overwrite older files when the available space remaining on the Micro-SD/SDHC card is less than 100MB. If the Automatic Recycle function is disabled, there must be at least 50MB hard drive space available for the camera to be able to record video files.

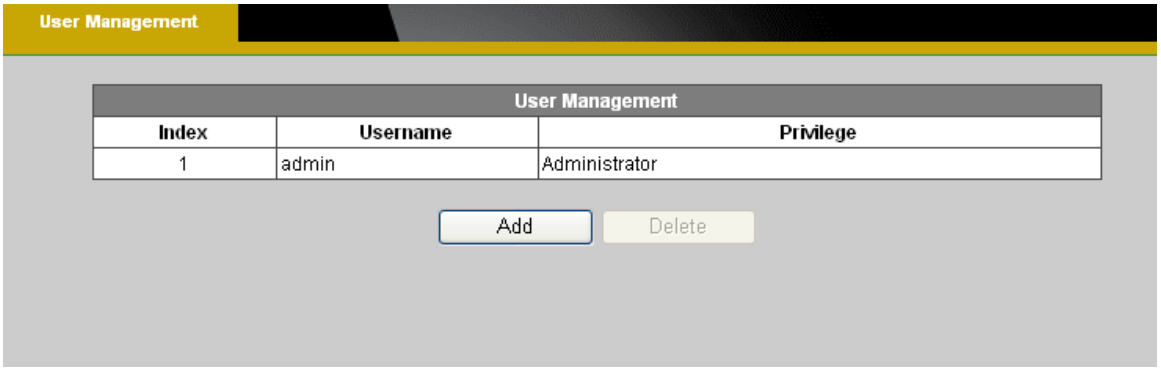
ii. **Offline Record** – Enable to keep recording if the Network Camera is offline.

Click **Apply** to apply settings or **Cancel** to cancel changes.

7.6 Maintenance

8.6.1 User Management

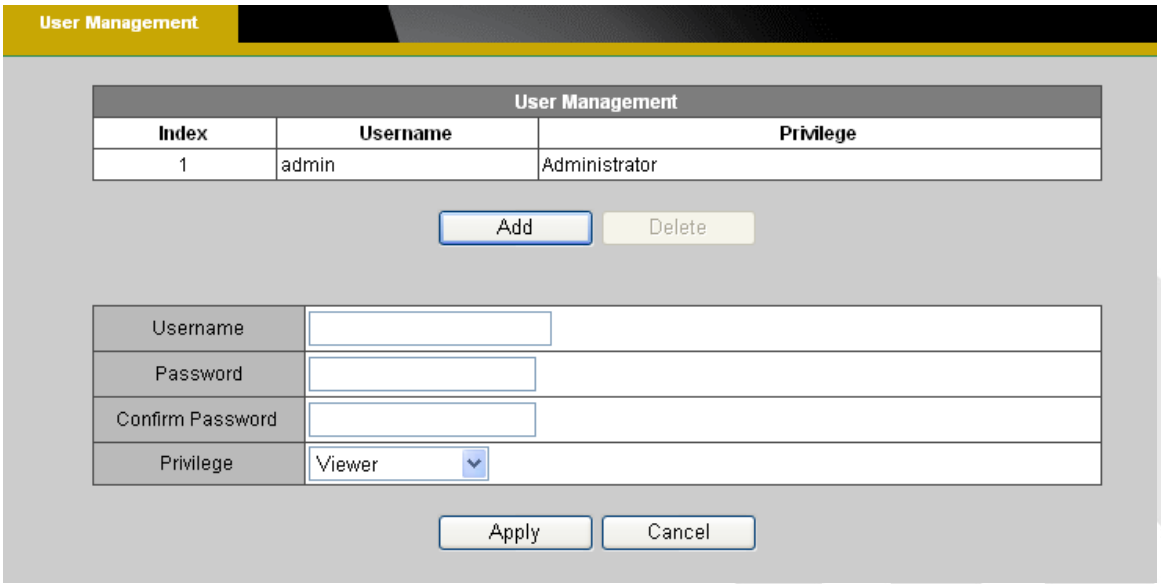
This section explains how to enable password protection and create multiple accounts. The administrator account name is “admin”, which is permanent and cannot be deleted.



a. Click Add to create an account.

b. Enter the new user’s name, password and confirm password. Administrators can add up to 10 user accounts.

c. Select the privilege level for the new user account from the drop-down list. Privilege levels can be assigned as:



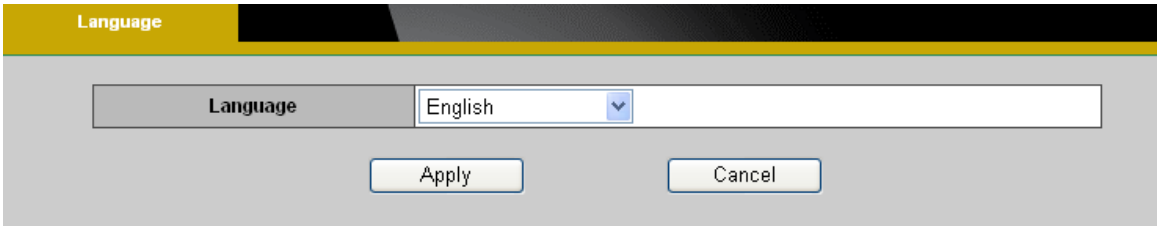
i. Administrator - user has access to view and change the Configuration page. Users with administrator privilege can change other user's access rights and user accounts. Click **Delete** or **Update** to delete or modify a user's account.

ii. Viewer - user can only access the main page for live viewing.

iii. Remote Viewer - user can only access the main page for live viewing using TCP protocol.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.6.2 Language

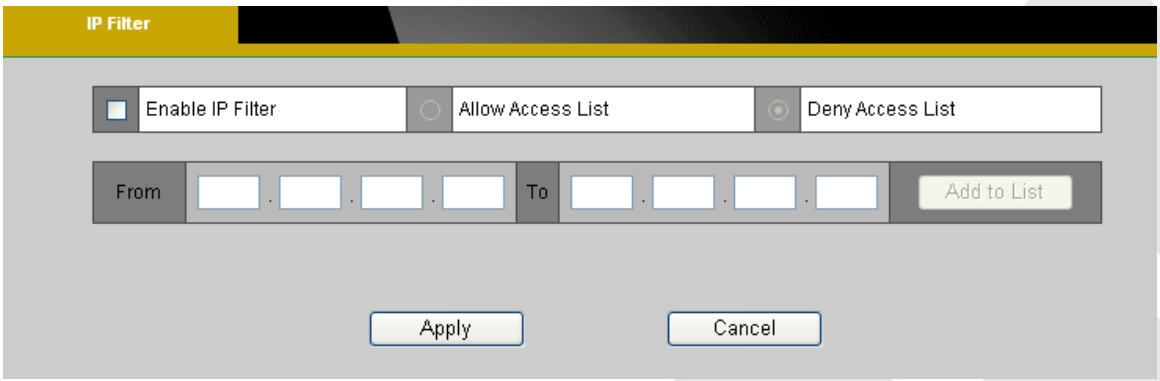


Select the desired language from the drop-down menu.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.6.3 IP Filter

The IP Filter is used to filter the IP addresses which are able to access the network camera. Enable the IP Filter and select to allow or deny a range of IP addresses access to the server. Click **Add to list** to add the IP range to the IP filter list.

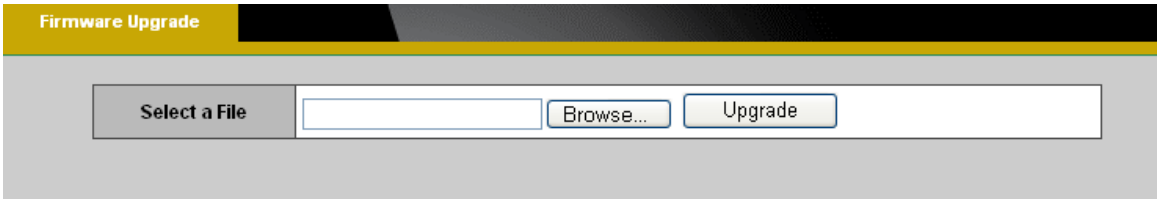


Click **Apply** to apply settings or **Cancel** to cancel changes.

8.6.4 Firmware Upgrade

This feature allows the user to upgrade the camera firmware. It will take a few minutes to complete the process.

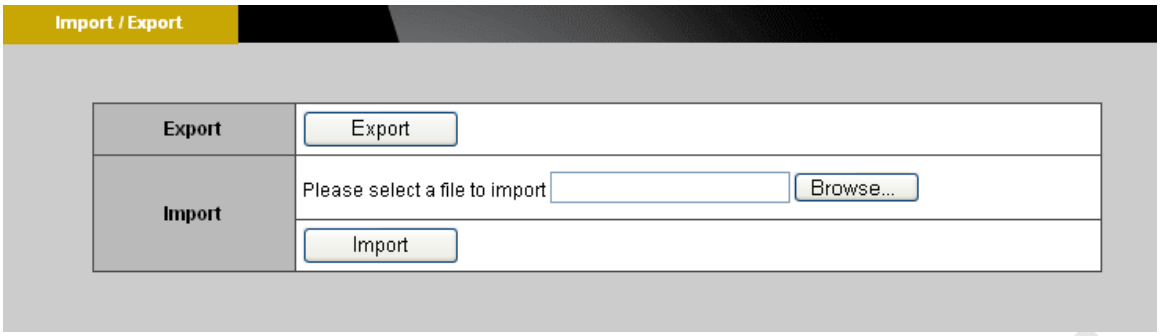
NOTE - Do not power off the camera or camera during the upgrade.



a. **Upgrade** - Click Browse… and specify the firmware file. Click Upgrade. The camera will begin upgrading and will reboot automatically when the upgrade is finished.

8.6.5 Configuration

This feature allows the user to export/import the configuration files of the network camera.



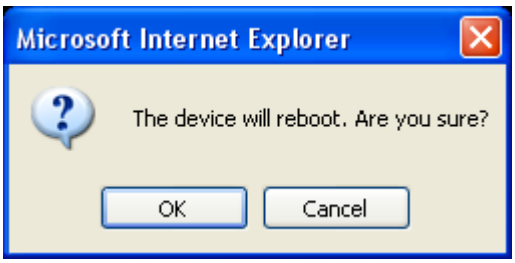
a. **Import/Export** - Click **export** to pop up a dialog to indicate the location and file to export. Click **browse** to indicate the location and file of the camera configuration and click **import** to import the configuration file back into the network camera.

8.6.6 Reset to Default

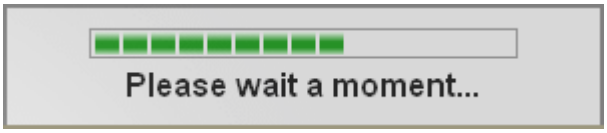
Click **Apply** to restore the network camera to factory default setting.

8.6.7 Reboot

This feature will reboot the camera. Click **Apply** to begin. A message will pop up asking "The device will reboot. Are you sure?" Click "OK" to continue. The camera will take about one minute to reboot.



The following message will show during the rebooting process.



When completed, the live video page will be displayed in the web browser.